

**Building the Extensive City:**

**Processes of metropolisation in European second-tier urban regions**

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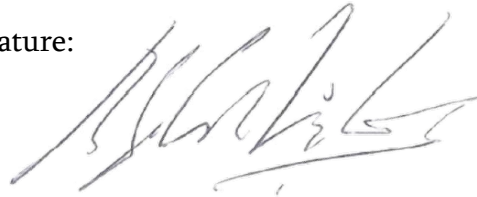
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I, Rodrigo Viseu Cardoso, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

London, 18 March 2016

Signature:

A handwritten signature in black ink, appearing to read 'Rodrigo Viseu Cardoso', written in a cursive style.

## **Abstract**

This research project investigates whether second-tier urban regions in Europe have functional, spatial, socio-economic and institutional characteristics which differentiate them in meaningful ways from primate urban regions. Based on the argument that second-tier urban regions can particularly profit from integration at that scale, it then explores whether the specific features detected may provide them with a greater ability to pursue that goal. The study fills two important gaps, as we do not know what differentiates second-tier urban regions regarding the aspects above, and in what ways those characteristics affect their integration processes. The research also helps to reveal a new and yet unexplored set of strategic options for second-tier cities, whose urgency is proportional to the extent to which they are neglected or hampered in their national urban systems. At a moment when cities have turned into large urban regions, size, functional mass and diversity and city-regional governance have been argued as major drivers of economic development, and the European economic and policy climate favours strategies that work more effectively with existing assets rather than adding new ones, integration is not only an ongoing territorial process but also a relevant strategic approach for second-tier urban regions. The research proposes an original interpretative lens to observe the integration of urban regions, namely the concept of metropolisation, a perspective which is not spatially selective and acknowledges different forms of urbanity, making a conceptual transition from a notion of cities dissolving into urban regions to one of urban regions consolidating into 'extensive cities'. The appropriateness of this concept to read contemporary urbanisation modes may find a particularly fitting response in the spatial features of second-tier urban regions. The study applies a set of comparative research methods to European second-tier urban regions, gradually focusing on three main cases studies: Porto, Portugal, Bristol, UK and Antwerp, Belgium.

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## CHAPTER 1. Introduction

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### 1.1 Second-tier cities rediscovered

Second-tier cities in Europe have been recently experiencing a renewed interest within policy and research contexts, but this has not yet compensated for a tradition of relative neglect when compared with large capitals and primate cities which absorb the attention of academics, practitioners and policy-makers. Recent studies and reports stress the relevance of paying attention to cities and regions beyond large capitals (OECD, 2012a; ESPON, 2012a; Dijkstra et al., 2013; Parkinson et al., 2015, Camagni et al., 2015). Other theoretical research argues the specificity of the historical trajectory, socio-economic structure and urban life in second-tier cities, while noticing the lack of scholarship on their particular features (Connolly, 2008; Van Heur, 2010; Hodos, 2007; 2011).

This should come as no surprise once we acknowledge that large, global cities are rare in Europe and that a relatively dense mesh of smaller, historically stable urban centres is a defining feature of the European urban system (Lichtenberger, 1970; Hohenberg and Lees, 1995; Dieleman and Faludi, 1998; Christiaanse, 2009). This is often highlighted in literature about urban Europe: Rozenblat and Cicille (2003) identify over 200 agglomerations with more than 200,000 inhabitants in their comparative study of European cities; Parkinson and colleagues use data from 124 cities for their ESPON report about ‘Second Tier Cities in Territorial Development in Europe’ (2012a). Turok and Mykhnenko (2007) find evidence of population change in 310 mid-sized to large cities. Those cities concentrate the majority of the European population and represent the diversity of European culture, even if the few largest cities economically dominate the urban system. In his research about visions and strategies in European mid-sized cities, Christiaanse summarises this condition:

*“In other parts of the world, cities are larger, lie farther apart, or form concentrated agglomerations in an otherwise thinly populated landscape. There are some large metropolises in Europe [...]. However, mid-sized cities are the norm and make it justifiable to refer to a typical European urban condition. These*



*mid-sized cities and their regional networks form the basis for Europe's urban culture and economy.*" (Christiaanse, 2009: 13).

Second-tier cities, as defined by ESPON (2012a), are the top layer of this middle hierarchy – the places lacking the economic weight, political importance and attractive pull of primate cities<sup>1</sup> (generally capitals, but not always), but still important enough to play a significant economic and cultural role in national and international contexts.

In a continent characterised by so many political, cultural, climatic and historical specificities, it is hardly surprising that the economic performance and living standards of second-tier cities vary significantly among and within European countries. But many of those imbalances, as well as the problems generally affecting second-tier cities, have only just started to receive attention. Recent work (Cox, 2012; Dijkstra et al., 2013) shows that the population and economy of some second-tier metropolitan areas is growing faster than in primate metropolitan areas<sup>2</sup>, a tendency confirmed by the wide-ranging ESPON report on the subject (ESPON, 2012a) in countries like Germany, Austria, Spain and Italy. But these studies also show that other second-tiers are experiencing little growth, or even consistent decline, in population, jobs, economic growth and presence of important urban functions, among other aspects. Despite their development potentials, persistent – often institutional – obstacles keep constraining the options of many second-tier cities and increasing the gaps to large capitals (Parkinson et al., 2015).

In fact, in many European countries, investments and policies visibly tilt towards capitals and primate cities. The growing gaps are illustrated by imbalances of economic performance (ESPON, 2012a), political bias about the location of public investment (Crouch and Le Galès, 2012) and different levels of functional performance (Göddecke-

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<sup>1</sup> While the term 'primate city' was originally used to denote a single city which captures a disproportionate amount of a country's population, producing a specific type of rank-size distribution (Jefferson, 1939), the concept has also been used beyond its demographic sense to contrast different city types. See Markusen, Lee and DiGiovanna (1999) for explicit comparisons between 'primate' and 'second-tier' cities, the former referring simply to the country's largest and politically and economically dominant city. 'Primate city' is used in this study in the same sense.

<sup>2</sup> Some non-metropolitan regions (according to the OECD definition) and formerly rural areas are also growing faster than the largest primate cities; see Dijkstra et al., 2013.

Stellmann et al., 2011). This often happens to such an extent that the arguments justifying additional attention to second-tier cities may not apply in countries lacking that distortive force: note that there are countries where one or several second-tier cities facing a dominant capital can be identified, and others whose history and political organisation led to more polycentric urban systems. Indeed, the ESPON second-tier city report (2012a) relates this ‘primate city bias’ to the different national urban systems. Second-tier cities in centralised states where capitals have a high degree of primacy (Portugal, France, United Kingdom) tend to be politically more neglected and economically less successful than those in more polycentric countries building on a “*powerful multi-cylinder economic engine*” (ESPON, 2012a: 16) such as Germany or the Netherlands<sup>3</sup>. This study will be particularly concerned with the former case, and design the research accordingly, as literature suggests that these are the contexts in which second-tier cities need greater attention.

## 1.2 A basic hypothesis: integration as an asset for urban regions

While there are certainly limits to the generalisation of city types, there are some clear differences between primate and second-tier cities, especially in countries where such hierarchies are visible in the national urban system. The most obvious difference is size: primate cities, political capitals or not, are usually larger than second-tier cities. Size is also a major explanatory factor for the presence and diversity of urban functions, especially consumer-oriented amenities (Burger et al., 2015), as cities need a minimum critical mass to attract and retain them (Lambregts, 2006). But large capitals in Europe have also profited from centuries of accumulation of public investment and policy bias regarding the location of important urban functions (Hohenberg, 2004). This triggered an historical self-reinforcing cycle through which new important functions would gravitate towards existing ones (ibid.; Hall, 2006), boosting their functional surplus beyond differences in size and perpetuating their leading position in the urban hierarchy.

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<sup>3</sup> Notably, the European Union polycentrism policies, inaugurated in 1999 by the European Spatial Development Perspective (ESDP) have actually strengthened this tendency, as decentralisation from European core countries to the peripheral ones has gone no further than the latter’s capital cities, increasing intra-national imbalances (Hall and Pain, 2006; Gloersen, 2006).

Therefore, primate cities tend to be both larger and comparatively better equipped with urban functions than second-tier cities.

Recent work by McCann (2015) and Ahrend et al. for the OECD (2015) shows once again (earlier arguments can be found in Camagni et al., 1986 and Camagni, 1993) that increased city size and greater functional diversity are major drivers of economic growth. Larger cities tend to be more productive, have a larger labour pool allowing for better matching, enable quicker career progression (Champion et al., 2014), ensure greater socio-economic diversity and greater interaction, and provide their citizens and firms with more opportunities for consumption and innovation. In parallel, capacity to attract and retain functions is a condition to fully exploit agglomeration economies and overcome the decreasing returns of urban size (Camagni et al., 2015). Cities hosting many and diverse functions have advantages over specialised centres (McCann, 2015) and tend to be more attractive for residents and firms, leading to greater population growth (Glaeser et al., 2001; Markusen and Schrock, 2009). In short, size and urban functions are interdependent aspects and both feed economic productivity and growth.

But cities have expanded or coalesced into large and interconnected urban regions, whose morphological structure, functional linkages and spatial flows go beyond individual urban centres. This means that increased size and functional performance can be achieved through integration with larger territorial scales. To support this process, McCann (2015), Ahrend et al. (2015), Camagni et al. (2015) and others propose a third driver of economic productivity, namely large-scale institutional integration. Less fragmented governance frameworks and cooperation networks in urban regions tend to mitigate the barriers to harnessing the potential of size and diversity that emerges at that scale. This can take the shape of a single institutional entity or be materialised by municipalities merging or working in cooperation (Feiock, 2004; Nelles, 2013).

Integration is particularly important in periods of economic downturn, when working more efficiently with existing assets seems a more viable urban policy than constantly adding new ones. But it should not be limited to the institutional dimension: it involves functional and spatial integration (connective infrastructure, shared and complementary functions, joint planning strategies, etc.) as well as an effort to develop the perception by communities and businesses of belonging to a common urban entity

(Lambregts, 2006). Pursuing greater integration in all these dimensions is necessary because a simple sum of individual urban centres in a polycentric territory does not seem to provide the economic advantages of a large monocentric city of equivalent size (ibid.). Meijers has provided evidence for this through the analysis of the provision of leisure, cultural and sports amenities in 42 Dutch urban regions: *“as far as the support for urban amenities is concerned, such collections of proximate cities are not even the sum of their parts.”* (Meijers, 2008: 2340). Therefore, an urban region would do well in *“setting free the metropolitan potential and the agglomeration economies that are locked into it.”* (Lambregts, 2006: 119). A recent report by the European Metropolitan network Institute (EMI) builds on these notions to argue that, from the perspective of agglomeration benefits, there is an *“enormous potential gain”* (Meijers et al., 2012: 21) in economic performance to be achieved by stronger integration in European urban regions, not least because they can develop *“top level urban functions that build on the critical mass of the entire region rather than individual cities.”* (ibid.: 63). This stresses again the interdependence of size, functional mass and diversity, and economic growth.

### **1.2.1 Integration is more important for second-tier urban regions**

A reservation must be introduced here because research has looked into the integration of large urban regions before. Dieleman and Faludi (1998), Kloosterman and Musterd (2001), Hall and Pain (2006) and others have questioned whether polycentric urban regions of all sizes are developing into integrated urban systems, and how spatial planning and policies are resolving the issues concerning that scale. However, a hypothesis emerging out of earlier research has not been addressed yet, namely that second-tier cities in particular would have something more to gain from greater spatial, functional and institutional integration with their wider urban region.

In other words, the benefits of large-scale integration vary from city to city but are arguably more relevant for second-tier than primate cities. Camagni et al. (2015) argue that it is an oversimplification to assume economic advantages in second-tier cities based only on the decreasing returns of agglomeration economies in the largest cities; the cases in which they do achieve better results than primate cities depend on other factors,

namely their ability to build networks at larger territorial scales. Such networks are seen as enhancing precisely the three drivers of size increase, functional mass and diversity and institutional cooperation discussed above.

Regarding size, early ESPON research (2005) has analysed European 'functional urban regions' and defined areas of close accessibility around them (called PUSH and PIA areas) that could provide additional growth potential if 'polycentric integration policies' were followed (using population growth and rank change as indicators). Such gains were deemed unimportant for large capitals due to their already dominant role in the region, which suggests the existence of strong core-periphery contrasts in terms of population and economic activity. However, they were considered very significant for a majority of less hegemonic smaller and mid-sized cities, as their accessibility areas are well endowed with population and jobs and they would have greater interest in 'capturing' these surroundings to achieve the potential benefits of increased size.

Regarding functions, a recent analysis by the German BBSR institute (Göddecke-Stellmann et al., 2011) suggests that the cities where the presence of top-level urban functions tends to be lower than would be expected from their demographic weight (compared to the European average) are mostly second-tier cities, while most primate cities have an above average functional performance on their own. Top-level functions are defined as functions with high economic importance, potentially serving a large territorial area. Lacking the functional mass and diversity that their size would imply, second-tier cities may have greater need than the functionally favoured, all-encompassing primate cities to rely on their wider surroundings to capture a larger and more diverse array of urban functions. A larger and more diverse functional entity can play a positive role in influencing the location options of people and firms (ESPON, 2010), feeding the self-reinforcing cycle now more apparent in primate cities. More top-level functions can emerge in response to the scale of the whole urban region. This enhances the perception of interdependence by businesses and communities and provides an incentive for integration efforts.

Finally, institutional integration – whether through a metropolitan government entity, the merger of local authorities or enhanced inter-municipal collaboration – may provide a further advantage for second-tier cities, namely the acquisition of a political

voice in relation to national government. This is even more important in countries suffering from excessive centralisation of political power and economic activity in the capital, where second-tier cities on their own cannot stand as a powerful interlocutor. If they can act as a single, strong entity of increased demographic, economic and functional importance, 'neglected' second-tier cities can become more important national players, able to influence higher level policy and counterbalance the capital. This is highlighted in recent debates about decentralisation and devolution of power in the United Kingdom, which propose the city-region as the most meaningful geographical unit to build alternatives to London and rebalance the national economy (Martin et al., 2015). Manchester is at the core of the debate around the 'Northern Powerhouse' vision for economic growth in the North of England. It is argued as a success story in great part due to its ability to build a cohesive and strong urban region that acts as a single institutional player when dealing with government and influences national policy to facilitate further empowerment (Harding et al., 2010; Rees and Harding, 2010).

In summary, this research project will work with a basic hypothesis emerging from this set of arguments:

- **Second-tier cities have great need and incentive to pursue deeper integration at the urban region scale, especially in contexts in which they are embedded in large and densely occupied urban regions and face an economically and politically dominant national capital.**

But to understand how this integration takes place, whether there is something special about it, and whether second-tier urban regions are particularly able to pursue it, we need to know more about their specific features.

### **1.3 Research questions: the unexplored features of second-tier urban regions**

Some fundamental features that distinguish second-tier cities have been made explicit before, with greater or lesser claims of universality. Earlier research has been particularly interested in patterns of location of economic activity (Markusen et al., 1999), the impact of agglomeration benefits and costs compared to larger cities (Camagni and Capello,

2015), historical and social particularities (Hall, 1998; King, 2010), integration in globalisation processes (Hodos, 2011) and the outcome of national and European policies (ESPON, 2012a). But beyond these aspects there is little literature analysing other spatial and institutional features that can be associated to a specific configuration of second-tier cities or help characterise their large-scale integration processes.

Relevant differences in this respect may rise at the urban region scale. This is the scale on which policy and research are increasingly focused, especially when discussing the issue of integration, but it remains an important gap in second-tier city research. In fact, the differentiation efforts summarised above tended to follow an historical and cultural definition of the ‘proper’ city and neglect the analysis of the larger scale of the urban region. This form of “*methodological cityism*” (Brenner, 2014: 15) is sensitive to differences between cities, seen as historically distinctive and spatially bounded locations, but assumes the scale of ‘the urban’ as an unproblematic historical and theoretical void awaiting generic expansion. This must be re-examined today, as large and medium-sized cities have turned into vast and polycentric urban regions and a great part of the population and economic activity is located outside core cities (Sieverts, 1997; Harrison and Heley, 2015). In these territories of extensive urbanisation, one size does not fit all, both in terms of historical development and contemporary configuration.

Therefore, the task of this research project is to start the exploration of the specificity of second-tier urban regions, based on two fundamental gaps in existing research that lead to the two questions below: first, we do not know which particular characteristics of second-tier urban regions differentiate them from other types of urban region; second, we do not know in what ways and under what conditions these particular characteristics provide second-tier urban regions with a greater ability to engage in integration strategies.

***Research question #1: Is there a relevant set of features in which second-tier urban regions are fundamentally different from other urban regions?***

Despite the abundance of studies about urban regions and the different orientations of their integration, research tends to focus either on the expansion of large global

metropolises (Sudjic, 1992; Scott, 2001) or the emergence of ‘polycentric urban regions’ (PURs) consisting of a set of equivalent urban centres (Dieleman and Faludi, 1998; Parr, 2004). This dual framework stresses the well-known opposition between monocentric, centrifugal and hierarchical urban systems, on one side, and polycentric, multidirectional and networked urban systems, on the other (Hohenberg and Lees, 1985; Batten, 1995; Burger et al., 2014), but neglects more mixed and complex models in between. Nevertheless, there are reasons to believe that some second-tier urban regions may not sit comfortably within this duality, although little effort has been made so far to differentiate them in a systematic way.

Earlier literature hints at these differences, namely by pointing out contrasts between the configuration of urbanisation around large primate cities and smaller cities, thus denoting the different ways to build polycentric urban regions. Important examples are Hohenberg’s long-term view of European capitals growing in a ‘central place’ framework and smaller cities developing in a ‘network model’ (2004); the distinction between ‘spiderweb metropolises’ around ‘first order’ dominant cities and ‘network metropolises’ elsewhere by Heynen et al. (1991); and the ongoing decentralisation of big core cities to small peripheral centres as the dominant form of city-region formation, as described by Hall and Pain (2006), confronted with the diversity of morphologies and growth processes in different city types uncovered by Font (2004). Note that this does not reveal only spatial contrasts between hegemonic primate cities and PURs made of several similar centres: between both models, there are many medium-sized cities, which do not play a dominant role in the functional, demographic and economic structure of their wider urban region, but are nevertheless their leading centres. In other words, these descriptions suggest that a more nuanced differentiation of urban regions outside the world of PURs is needed. This is why this study will focus on specifying second-tier urban regions through their contrasts to primate urban regions.

In fact, the common feature of the descriptions above is that ‘first order’ cities tend to play a historically dominant role in their urban regions, which are assumed to evolve from an initially monocentric to a polycentric condition based on decentralisation of activity, as core cities project their large-scale political and economic expansion agenda over a relatively passive hinterland with no prior history of urbanisation, and define a



strong functional, socio-economic and political core-periphery hierarchy. Such processes can cast a large ‘agglomeration shadow’ over surrounding territories (Partridge et al., 2009), as urban functions gravitate towards each other and override the opportunity of smaller centres to attract important and diverse functions (Hohenberg, 2004; Burger et al., 2015), except for specific sectors (Phelps et al. 2001).

Conversely, smaller and ‘weaker’ cities lacked the attractive pull to first gather and then redistribute functions and activities, as well as the ability to define a large-scale hierarchy by overriding local spatial, functional and socio-economic configurations across the urban region. Expansive processes centred in core cities arguably played a weaker role in the development of the urban region and secondary centres. Such looser forms of growth may have allowed different parts of the urban region to develop more freely, leading to less hierarchic and more fragmented urban regions and making the city-hinterland contrast less accentuated than in the case of ‘first order’ cities. Of course, such contrasts depend not only on the type of core city, but also on the nature of the hinterland – the historical role of smaller centres, demographic structure, administrative divisions and governance relations. These factors interact to add nuance and specificity to the general tendencies hypothesised here.

These different processes are likely to be visible in (1) the overall presence and distribution pattern of urban functions; (2) the heterogeneity and hierarchy of current socio-economic configurations; (3) the early origins and historical progression of urban growth; and (4) the institutional relations towards cooperation between the different parts of the urban region. These four aspects are particularly important for this study, and will be the foci of the empirical analysis, as they can define a specific configuration of second-tier urban regions as well as help characterise their integration processes.

Overall, a process of urban region configuration and historical formation that departs from the centrifugal, core-to-periphery model usually associated with large primate cities, but also from the notion of fusion of similar nearby centres of the PUR concept, can be appropriate to describe second-tier urban regions. And indeed, an ‘in-between’ model, departing from the hierarchic vs. networked duality, has been theorised by Champion (2001) in his three-tier typology of *centrifugal*, *fusion* and *incorporation* modes. This will be a central concept in the analysis that follows. While the first two

types roughly express the accepted distinction between the outward expansion of large core cities and the convergence of smaller and proximate centres in PURs, the incorporation mode corresponds to a mixed trajectory of core city expansion blending with the merger and densification of pre-existing urban centres and fragments spread across the region, whose development is not necessarily the outcome of core city influence. This results in a less hierarchic form of functional polycentricity and a more heterogeneous urban region. While recent literature used Champion's concept to argue that cities successively went through different modes of urban region formation in different periods (Solis et al., 2015), his tripartite definition remains somewhat underused by research, neglecting more mixed 'incorporation' modes to the benefit of the clearer centrifugal vs. fusion contrast. The question whether certain types of urban region tend to specific modes of historical development and contemporary configuration remains unanswered, as well as whether correlates between such modes of formation and functional, socio-economic and institutional structures are apparent in those urban regions. In the empirical chapters, the study will explore whether the 'incorporation mode' broadly defines a model where second-tier urban regions typically operate.

***Research question #2: Do these specificities affect integration processes and provide second-tier urban regions with greater ability to pursue integration strategies?***

Of course, depending on the national urban system and the long-term dynamics of territorial urbanisation, there are nominally 'second-tier' cities acting like small capitals, dominating and emptying out their peripheries, as there should be others embedded in the more horizontal patterns of PURs. The hypotheses proposed here make no claims for universality and recognise the limits of the generalisation of city types. However, the second-tier cities that matter for this research are those that can be situated outside the hierarchic vs. networked duality; they may have not only greater need but also greater ability to pursue integration at the urban region scale. This is because the four aspects mentioned above, in which the specific characteristics of second-tier urban regions are likely to be more visible, are also likely to influence their type of integration, as well as their ability to pursue successful strategies for that purpose. Together, they provide the conditions under which the drivers of growth through integration - size increase,

functional performance and institutional cooperation - can be explored. The list below, supported by existing literature, explains why these four analytic aspects are key factors defining the prospects of integration of urban regions, in its various dimensions:

(1) The presence and distribution of urban functions can be a major trigger or a barrier to integration in urban regions, as linkages between places with complementary functions and the exploration of their synergies drive the creation of extensive 'network cities' of regional scale (Batten, 1995; Meijers and Burger, 2015). But if primate and second-tier urban regions do have different functional structures, as indicated above, different relations between core cities and smaller centres will emerge, as well as different levels of interdependence and complementarity, leading to a tighter functional integration in urban regions where these levels are higher. As such, the greater need for integration in second-tier urban regions may correspond to a greater ability to pursue it, assuming that a functionally more interdependent and balanced urban region provides a more fertile ground for a reciprocally satisfying integration project.

(2) The socio-economic configuration of urban regions, namely the reach and strength of core-periphery hierarchies and the socio-economic diversity that core cities, smaller centres and the urbanised areas in between are able to generate and retain, is equally important. Markusen and Schrock (2009), Glaeser et al. (2001) and Lee (2010) have provided evidence about the mutually reinforcing relation between the existence of important functions and amenities, population growth and socio-economic sorting. In urban regions that have evolved through an 'incorporation' rather than a 'centrifugal' mode, secondary centres are more likely to host jobs and services and provide a more diverse socio-economic environment to citizens and firms (Champion, 2001), leading to greater autonomy and heterogeneity at smaller scales. By contrast, centres around dominant core cities tend more to be dependent satellites of the centre (ibid.), leaving the urban region more hierarchically constrained by patches of homogeneous socio-economic typologies organised around the core. If second-tier urban regions are closer to the former model, the reasons to pursue integration, as perceived in the different parts of their territory, may be less based on a sense of dependence and hierarchy and more on mutual economic gain and an engagement in horizontal and unconstrained relations.

(3) The origins and long-term trajectory of urban growth leading to the emergence of urban regions left behind physical, social and infrastructural traces over which contemporary forms and networks are imprinted. Knowing those pre-existing conditions is necessary to make sense of the features that distinguish the territory today (Champion, 2001; Lambregts, 2006). Centrifugal, progressive and hierarchic expansion from core cities towards the empty 'countryside', on one hand, and undirected, simultaneous and locally more diverse growth processes, on the other, are likely to produce different territories, in terms of cultural identity, spatial forms and presence of infrastructure (Meulder, 2008). If second-tier urban regions tend to the latter model, due to the lesser power of core cities to control the urbanisation of their hinterland, this offers them a specific set of conditions to build relations between different places.

(4) All these features are potentiated if they are acknowledged by the actors and institutions responsible for pursuing integration. This stresses the importance of a cooperative institutional environment engaged in integration, which depends precisely on the perception of symmetrical relations and the potential for joint gains (Nelles, 2013). Earlier research has argued that visions dominated by single core cities reduce the willingness of peripheries to engage in large-scale integration as they anticipate an unfair distribution of gains (Lefèvre, 1998). Small centres around dominant capital cities share a perception of excessive dependence on the core city and often respond by overstating their autonomous identities, thus undermining integration projects (Phelps et al., 2006). However, lacking the unifying power of a leading city in 'polycentric urban regions' consisting of a set of equivalent centres can equally harm integration due to fragmentation and parochial thinking (Dieleman and Faludi, 1998; Nissen, 2008) and the inability to create a 'metropolitan' identity shared by all (Lambregts, 2006). Halfway between dominant core city and polycentric network models, second-tier cities may be in a privileged position to engage in large-scale integration strategies.

In summary, the hypothesis is that, within certain conditions framed by the national urban system and the history and dynamics of territorial urbanisation, second-tier cities may end up being more benign to the wider urban region, especially when compared to primate cities. They are characterised by a more balanced distribution of

urban functions, a less hierarchic socio-economic configuration, a history of more polycentric and diverse urban growth, and a more collaborative institutional environment. This links their arguably greater need for urban regional integration to a potentially greater ability to achieve it.

Of course, most urban regions do not follow as clear-cut patterns as this would suggest. They change in time (Champion, 2001) and, importantly, they can be classified differently – more or less polycentric, integrated, hierarchical – according to the aspect of analysis – morphological, functional, political (Hall and Pain, 2006). The contrast is stressed here to help define the common features typically shared by specific types of urban region. However, as the research design will explain, the point of shaping a comparison through four separate aspects of similar importance is precisely uncovering this potential lack of correspondence between the different dimensions of urban regions.

#### **1.4 Key concepts and underlying theory**

Second-tier and other cities are embedded in large urbanised regions and large-scale integration, whatever its form, happens in the so-called territories of ‘extensive urbanisation’. A growing set of literature emerged in recent decades describing the end of cities as bounded entities and the generalisation of undirected, fragmented and dispersed urbanisation processes of territorial scale, shifting the matter of concern from the ‘city’ to the city-region, city-territory, urban region, and other neologisms defining the new entities taking shape (Gottmann, 1961; Friedmann, 1978; Sudjic, 1992; Ascher, 1995; Sieverts, 1997; Soja, 2000; Nello, 2001; Schmid, 2006; Brenner, 2014)<sup>4</sup>. Extensive urbanisation is an umbrella term for the contemporary large-scale processes of territorial reconfiguration, supported by ubiquitous infrastructure, in which new land uses, networks, activities and lifestyles penetrate urban and non-urban areas alike, reshaping both, leading to the dissolution of their borders and the convergence of their meaning.

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<sup>4</sup> There is a whole literature dedicated to name and describe the different expressions of this phenomenon, and an immense set of neologisms in different languages and with slightly different meanings (for a more complete lexicon, see Rufi, 2003). It is not the task of this study to establish the differences between these terms, whose particular outlook is often based on local observations – hence the tendency to keep the original languages – rather than global generalisations.

Despite the often judgemental views contrasting the ‘proper’ city, its history, culture and built fabric, with the disregarded and allegedly generic territories of the ‘suburban’, ‘peri-urban’ and the ‘periphery’ (Nello, 2001; Phelps et al., 2006; Vaughan et al., 2009), this distended form of urban settlement is now dominant across Europe and configures the underlying territory where spatial, functional and institutional integration processes happen. Although some scrutiny is needed about how much this is a dominant condition across the planet, the reference to ‘planetary urbanisation’ has been used quite often (Brenner and Schmid, 2011; Brenner, 2014) in a similar sense. The term ‘extensive urbanisation’ lacks this planetary ambition, but is particularly interesting for the line of reasoning so far because it appears in opposition to ‘intensive’ urbanisation processes, characterised by the physical expansion of core cities into dense agglomerations over a non-problematised void (the ‘empty’ hinterland) following a relatively linear chronology and a spatially selective distribution of activity. This is the 20<sup>th</sup> century model of metropolitan growth which has been now almost completely replaced by the ‘extensive’ model, in which urbanisation is more polycentric, fragmented, non-sequential and erratic, colonising the territory like ‘a fluid percolating through a sponge’ (Secchi, 1989).

What comes out of this comparison is that the contrasts between the features of intensive and extensive urbanisation seem to resonate, in terms of spatial configurations and dynamics, with the contrasts between primate and second-tier urban regions discussed above. This has two implications: first, the paradigm of extensive urbanisation may describe in a more appropriate way the spatial and functional structures and growth processes hypothesised as prevalent in second-tier urban regions, by giving greater prominence to non-hierarchic and undirected forms of growth, and heterogeneous and localised spatial-functional configurations exempt from strong core-periphery constraints. Second, this type of urbanisation may not be as ‘recent’ as some literature assumes (i.e. pertaining to the second half of the twentieth century) turning second-tier urban regions into privileged territories to uncover its early manifestations. The theoretical chapters that follow will discuss this further by relating four defining features in the current theory on extensive urbanisation to the four concrete aspects argued above as illustrations of the differences between primate and second-tier urban regions: functional distribution as an expression of the ubiquity of centrality across the territory; contrasting

socio-economic configurations adding precision to the increasing isotropy of urbanised space; the historical process of urban region formation as a ‘palimpsest’ for the extensive dispersion of population and built-up space; and the routes to institutional cooperation in urban regions as a corollary of the theoretical perplexities constraining their definition.

#### **1.4.1 The concept of ‘metropolisation’ as an interpretative lens**

Overall, the concept of extensive urbanisation seems useful to read the spatial, functional and institutional features of second-tier urban regions, even more than primate urban regions. We now need an approach that equally interprets the processes of integration in territories characterised by forms of extensive urbanisation through an appropriate lens.

This can be embodied by the concept of ‘metropolisation’ - sometimes rendered ‘metropolitanisation’, as the terms have been used interchangeably. Metropolisation, in the sense proposed by Indovina (2004), Nissen (2008), ETH Basel (2010) or Meijers et al. (2012)<sup>5</sup>, is understood here as (1) a territorial process through which spatially, functionally and institutionally fragmented urban regions emerge as coherent urban systems able to reap the benefits of scale; (2) a conceptual transformation through which the qualities and features formerly attributed to the space of the city are reconstructed at the scale of the integrated urban region; and (3) a development strategy aimed at this integration. The key conceptual shift captured by metropolisation is that it is a non-city-centric framework that sees the full scale of the urban as an ‘extensive city’, rather than a spatially selective concept interpreting the urban as a set of proper cities embedded in ‘other’ urbanised spaces. It responds to the concerns of several scholars arguing that urban research and policy give too much attention to core urban centres and neglect the larger urban territory, and that the city-region concept is still constrained by a core-periphery mentality, although people, activities, functions and infrastructure are no longer confined to specific territorial nodes (Indovina, 2004; Domingues, 2008; Harrison and Heley, 2015). In the words of Indovina (1990; 2004), namely through his observation of north-eastern Italy, metropolisation is the process of territorial consolidation that

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<sup>5</sup> The term ‘metropolisation’ (or ‘metropolitanisation’) has been used with different, while related, meanings – see Krakte, 2007 and ESPON, 2012b. Chapter 3 will uncover this genealogy and clarify the sense given to the concept for the purposes of this study.

stabilises dispersion and reconstructs urban qualities as cities turn into urban regions. In other words, there is a conceptual transition from cities *dissolving* into formless urban landscapes – something that can be described as the ‘regionalisation of the city’ – to a vision of urbanised territories *consolidating* into integrated extensive cities (Portas et al., 2007) – something that could be seen as the ‘citification of the region’.

This transformation process through which urban regions become extensive cities needs a specific approach to planning for that scale, as the interpretative lens of metropolisation recognises that urban life can emerge at any point of the territory. As such, it makes a plea for planning and policy frameworks to expand the qualities and expectations formerly reserved for cities – urban design, transport links, etc. – to the scale of extensive urbanisation (Sieverts, 1997; Hall, 2013). This approach has been developed in different ways throughout Europe, and particularly well captured in French second-tier cities – shifting from a hierarchy based on core city mayors asserting power over the metropolitan area to an interdependent network of metropolitan actors and institutions (Nicholls, 2005) – and in concept of ‘metropolitan cities’ in Italy, illustrated by the ‘city of cities’ project for the Milan urban region (Balducci et al., 2011).

It may be no coincidence that this spatially integrative (rather than selective) approach has been applied to second-tier cities, as its features closely relate to the hypotheses about their specificity proposed above – the loose core-periphery hierarchies, the more balanced functional spread, the non-centrifugal process of growth, the more complex and heterogeneous functional arrangements, the potentially more symmetrical set of institutional relations, all point to an interpretation of the urban region and its integration process which is closer to the concept of metropolisation. But note that second-tier urban regions are not ‘polycentric urban regions’ consisting on a set of similar centres; they have a leading, albeit not dominant, core city. Therefore, the concept of ‘citification of the region’ brought by metropolisation means not only that a previously unconnected set of urban entities consolidates into a larger, more equipped and more diverse extensive city – as could be the case in PURs – but also that the leading city can project its strong identity throughout the urban region to reinvent itself as a ‘city’ of territorial scale. We have seen above that second-tier cities may have a particular incentive to engage in this upscaling exercise enabled by metropolisation.



## **1.5 Introducing the study: contribution of the thesis**

This research project investigates whether second-tier urban regions have functional, spatial, socio-economic and institutional characteristics which differentiate them in meaningful ways from other urban regions. Based on the argument that second-tier urban regions can particularly profit from integration, the study then explores whether the specific features detected can provide them with a greater ability to pursue that goal. This research fills two important gaps, as we do not know what exactly differentiates second-tier urban regions regarding the aspects above, and in what ways those differences affect their integration processes. The study also helps to reveal a new and still unexplored set of strategic options for second-tier urban regions, whose urgency is proportional to the extent to which they are hampered by their national urban systems. Indeed, integration is not only an ongoing territorial process but also a relevant strategic approach for second-tiers, especially at a moment when cities have turned into large urban regions, when size, functional mass and diversity and integrated governance have been argued as major drivers of economic development, and the European economic and policy climate favours strategies that work better with existing assets rather than adding new ones. The research proposes an original interpretative lens to understand integration, namely the concept of metropolisation, whose appropriateness to read contemporary urbanisation modes and envision their future may find a particularly compatible field of application in the features of second-tier urban regions.

### **1.5.1 Research design: initial methodological considerations**

Alongside policy aspects, second-tier cities need greater attention and differentiation in research contexts. When confronted with their particular issues, existing studies often follow a generic and hierarchic approach that considers all cities, regardless of their specificity, as a subplot of the 'urbanisation of the world' (Soja and Kanai, 2007). They are seen more as *entries* sitting in tables which measure indicators designed according to the interests of a few powerful cities (Göddecke-Stellmann et al., 2011) than as *entities* following specific trajectories in particular contexts. The resulting hierarchic bias tends to consider second-tier cities as incomplete or stunted versions of large global cities

(Hodos, 2011) and create narratives opposing ‘command and control’ centres to other cities “*on the receiving end of development*” (Connolly, 2008: 4). Second-tier cities are therefore truly made ‘secondary’, downgraded and less successful versions of their larger counterparts, aiming mainly to climb in rankings measured against a particular standard. As a result, research on second-tier cities has often been made peripheral: questions designed for the larger cities are simply downgraded to test their validity in other contexts, without a critical analysis of the fundamental differences between cities.

By exploring such differences based on criteria which are particularly relevant for second-tier cities, this study tries to oppose that common research trend. It follows the critique of the hierarchic method and the arguments for more differentiation and less hierarchisation in urban research, especially when comparing global or primate cities to secondary cities (Hodos, 2011; Chen and Kanna, 2012). As such, it will privilege a case study-based comparative approach that does not aim for strong statistical proof but rather for a deep inquiry on the different ways that particular instances respond to the research questions (Tilly, 1984; Brenner, 2001; Flyvbjerg, 2006). Therefore, there will be no overall claims of generalisability or ‘universal’ properties of second-tier urban regions. There are second-tier cities in Europe whose strategic priorities may be far from achieving greater integration with the urban region (ESPON, 2005) and urban regions whose spatial structure does not fit the conditions privileged by a process of metropolisation. No single typology of second-tier urban regions exists and the research will hardly provide evidence of the universal benefits of integration. Nevertheless, while the findings will certainly be argued as relevant for the selected case studies, they will also define a region of variability within which other second-tier cities probably operate. The expectation is that this provides a research framework – a set of relevant questions – for other cases and opens up investigative paths for future studies.

This simultaneous quest of finding individual specificities in particular instances and defining a region of variability that encompasses other cases will be supported by a mix of quantitative and qualitative comparative methods looking at the four aspects of differentiation discussed above: functional structures, socio-economic configurations, historical trajectory, and institutional arrangements. We have seen that combining all aspects is important, as they mutually interact and the hypotheses proposed about

second-tier urban regions can have very different manifestations in each one. Therefore, the research is designed in a way that the analysis of each of these four aspects can stand alone and provide relevant findings, but only through their consideration as a whole can the full picture of the specific features and integration processes in second-tier urban regions become clear. This results in an organisation in which each aspect is analysed by a separate chapter, with all aspects given a similar importance, but the core of the argument flows along the four chapters rather than reaching a climax in one of them.

The order in which the findings are presented follows the scope of the comparisons, which can be described as progressing gradually from the general to the specific. This is, in turn, quite dependent on pragmatic choices related to the availability of fundamental data and the desire to employ it to the advantage of the study – clearly, this research is problem-driven rather than methodology-driven (Flyvbjerg, 2006). The first focus of analysis will be the functional structure, where the availability of relevant and recent data helps to justify the opportunity for a broader comparison between many primate and second-tier urban regions in Europe, setting the scene for the more detailed approach coming next. In the next step, addressing socio-economic configurations, there is sufficient data to produce a meaningful comparison between the case study second-tier urban regions and their respective capitals. By contrast, both the historical trajectory and the institutional arrangement aspects need a deeper inquiry of the individual case studies, which will be compared to each other in greater detail. In the end, the different comparative frameworks add up to a more complete picture of second-tier urban regions, with empirical material able to answer questions about such urban regions in Europe overall, highlight specific contrasts between some of them and primate urban regions and explore similarities and variations among representative cases.

### *Selecting the case studies*

After an initial analysis covering a broad set of second-tier cities in Europe, three case studies have been selected for a more detailed exploration in the remaining empirical chapters. They emerged from the list of 126 second-tier cities recently produced by ESPON (2012a). Their final selection conforms to the criteria discussed earlier: they had

to be second-tier cities in countries with a clearly dominant capital, and to be embedded in larger and densely occupied urbanised regions. While other cases could have been selected according to these criteria, the choices try to bridge the divide between North and South that often characterise European comparative urban research.

- *Porto*, in Portugal, is a second-tier city in a national context of strong political and economic dominance of Lisbon, but also the main centre of a highly dispersed, interconnected and polycentric urban region spreading to Northern Spain, whose demographic importance matches the capital.
- *Bristol*, in the United Kingdom, is one of the ten British core cities<sup>6</sup> “*falling behind London*” (Parkinson et al., 2004: 10) and the heart of a second-tier urban region aiming for devolution of power where the shift to functional and morphological polycentricity has been quickened in recent years (Burger et al., 2011).
- *Antwerp* is the second city of Belgium, often conceived as part of the ‘Flemish Diamond’ polycentric urban region (Albrechts, 1998), but a core city in its own right embedded in a highly scattered and fragmented urbanisation pattern and suffering economic and functional dominance by the capital (ESPON, 2007).

## 1.6 Structure of the thesis

This research project will be organised in three parts. Part 1, ‘Defining the Research Terms’ establishes the theoretical and methodological framework for the subsequent empirical work. At the risk of repetition, it elaborates on the issues summarised in this introduction, through wide-ranging literature reviews and theoretical reflections.

Chapter 2 provides a theoretical overview of the second-tier city concept. It starts by critiquing different definitions of second-tier cities and delimiting which perspective matters for the study. Then it evaluates recent evidence about the state of second-tier cities in Europe and explains why some are in need of more urgent attention than others.

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<sup>6</sup> The Core Cities group includes the eight largest English cities outside London (Birmingham, Bristol, Leeds, Liverpool, Manchester, Newcastle, Nottingham and Sheffield) alongside with Cardiff and Glasgow.

A review of existing arguments about what distinguishes second-tier cities serves to discuss different methods of comparative research and argue the theoretical standing of second-tier cities as a specific research concern rather than a sub-theme of generic urban studies. Finally, existing research is shown to have missed some important second-tier city issues, namely their transformation into large urban regions.

Chapter 3 picks up on the previous observations to discuss the urban region concept within the paradigm of extensive urbanisation. It summarises the distinctive features of this now dominant form of urbanisation and the new perplexities it creates for research and planning. The concept of metropolisation is then introduced as a perspective on integration in territories characterised by forms of extensive urbanisation that privileges the consolidation of urban regions into emergent extensive cities – a ‘citification of the region’ – rather than the dissolution of cities into loose urban regions – a ‘regionalisation of the city’. Drawing upon the theoretical framework now built, the chapter ends by summarising why integration is important for second-tier urban regions and why metropolisation is an appropriate lens to interpret it.

Chapter 4 concludes Part 1 and describes the research design. It retraces the path towards the formulation of the two research questions and summarises the methodological implications of the theoretical framework developed so far. This includes a critique of different methods of comparative research, the need to prevent the assumption that different analytic perspectives on second-tier urban regions are isomorphic, and the advantages and limitations of a diverse comparative framework gradually progressing from wide-ranging to more detailed case study comparisons. The options emerging from this approach originate the operative sub-questions and techniques used in the individual empirical chapters.

Part 2, ‘Analysing the Second-tier Urban Region’ corresponds to the empirical work. It starts with Chapter 5, dedicated to present the case studies. It details the reasons why Porto, Bristol and Antwerp were chosen and how they fit the selection criteria. It then summarises their history as national second-tier cities and their relation to the capital. Finally, the preliminary question whether these urban regions would, in principle, profit from greater integration is addressed, focusing on their size increase potential, functional performance at several scales, and institutional fragmentation.

Chapter 6 is the first empirical chapter and focuses on urban functions. It compares a wide range of second-tier and primate urban regions regarding the presence and spatial distribution of urban functions, building upon a recently released European database. The analysis evaluates the existence of a ‘primate city bonus’ – a surplus of urban functions in primate cities – and the different functional performance of second-tier cities in mono- and polycentric countries. The analysis then turns to how primate cities exploit the scale of their urban region to support their own functions, but leave that region functionally underserved, casting what can be called an ‘agglomeration shadow’ over their hinterland. The question is whether second-tier cities lack this absorptive and exploitative capacity and their urban regions are better endowed with important urban functions. The conclusions highlight that these cities cast a smaller agglomeration shadow over their surroundings, build functionally more interdependent urban regions and have an incentive to capture a wider array of urban functions at that scale.

Chapter 7 looks for patterns in socio-economic structures that resonate with the functional contrasts detected above, comparing the three case study second-tier urban regions with their respective capitals. The analysis uses recent geodemographic research based on census data that mapped urban areas according to the spatial distribution of socio-economic categories. The findings show that despite differences between case studies, the contrasts between second-tier and capital urban regions do follow a similar pattern. Capitals tend to impose a core-periphery hierarchy of regional scale, associated with intensive centrifugal expansion, characterised by large and differentiated patches of homogeneous socio-economic typologies. Second-tiers reveal the weaker role of core cities in constraining development and show more diversity and mixture at smaller scales, a lesser presence of large-scale uniform typologies and greater permanence of local socio-economic structures. This is visible in the greater diversity of secondary urban centres, which tend to be more uniform around primate cities.

Chapter 8 explores whether the features detected above correspond to a common mode of urban region formation that helps explain their functional and socio-economic configuration. To do that, the chapter looks at long-term population data (1890-2011) to compare the emergence of the Porto, Bristol and Antwerp urban regions, questioning the assumption that undirected and dispersed processes are recent stages of urbanisation..

Second-tier urban regions may be a privileged territory to observe this, as the weaker impact of their core cities on regional urbanisation, when compared with the intensive centrifugal expansion of larger cities, may have preserved more traces of earlier settlement forms. The analysis includes mapping changes in population density, charting population change in core cities, agglomerations and functional urban regions and evaluating the impact of core city proximity in population growth. Despite local variations, the results show a trajectory situating second-tier urban regions in a mixed 'incorporation' model between centrifugal and fusion modes of urban region formation and uncovers their curious historical similarities as sites of early (proto-)industrialisation.

Chapter 9 argues that the findings so far can provide a set of privileged conditions for integration. The barriers to integration strategies in polycentric urban regions lacking a leading city and in urban regions with an excessively dominant city can be mitigated by second-tier urban regions whose characteristics are between both models. But this may or may not be acknowledged by policy-makers in urban regions in their pursuit of integration strategies. Since none of the case studies has a city-regional government, the willingness for collaboration between municipalities is a major driver of integration strategies. The analysis is based on interviews with top-level officials both in core cities and secondary municipalities and the results show that local particularities greatly affect the perception of inter-municipal relations and the prospects of integration. The three case studies show different features, ranging from an evolution towards the extensive city model to a 'little capital' behaviour unconcerned with the underlying spatial patterns.

Chapter 10 constitutes Part 3, the final section of the study. It summarises the key questions and distils the conclusions emerging from the previous chapters. It evaluates the contribution of the study to the recent interest of policy and research in second-tier cities and to a more informed body of knowledge about the specificity of second-tier urban regions. It discusses the impact of the findings on the potential ability of second-tier urban regions to achieve successful integration and eventually enjoy its benefits, and reassesses the usefulness of the metropolisation concept to interpret the consolidation of urban regions into 'extensive cities'. Finally, the chapter ends with a discussion of questions that remain unanswered and proposes paths for future research.





- PART 1 -

## DEFINING THE RESEARCH TERMS

Second-tier cities and the territories of metropolisation

## CHAPTER TWO. Second-tier cities in Europe

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Second-tier cities in Europe require explicit and deeper attention both in research and in policy contexts. This research project looks at their specific ability and need to pursue further integration with their urban region, increasingly the preferred scale of research analysis and policy intervention in urban Europe. The spatial and functional structures of second-tier urban regions underlying that integration process may be quite different, and may provide different integration routes and potentials, from those around large primate cities. Exploring this argument requires, first of all, a definition of the research terms, namely what is meant by ‘second-tier city’ and by ‘urban region’, what has been already said about them, and where there may be gaps that this research can fill. Therefore, the purpose of this and the next chapter is to review existing theories and definitions of both concepts and arrive at a stable working definition that allows the work to proceed.

Chapter 2 starts by discussing the different definitions of ‘second-tier city’. Section 2.1 reviews the conflicting understandings of cities as either political, historical and territorial entities or merely functional entries in global rankings. The definition used henceforth will be justified by a critique of both trends and their significance for research and policy approaches. This is followed by section 2.2, in which evidence on the state of second-tier cities in Europe is analysed. This includes an account of the research and policy limitations restricting the consideration of the diversity of city contexts and trajectories in urban Europe. The section concludes by further delimiting the selection criteria and proposing what cities within the chosen definition are in need of more urgent attention. The argument that second-tier cities can be seen as a specific research concern rather than a subplot of the generic study of the ‘urban’ is the focus of section 2.3. To illustrate that, this section conducts a revision of existing literature about the relevance of differentiating second-tier cities, and highlights their specific features and main contrasts to large capitals and primate cities. Finally, the conclusion in section 2.4 argues that these previously explored features of second-tier cities have mostly focused on their historical, political and economic trajectory and largely ignored spatial and functional structures. Equally, existing research has often looked at second-tiers, and smaller cities in general, as illustrations of the archetypal ‘European city’ and has not

sufficiently acknowledged that, like their larger counterparts, second-tier cities also produce and are embedded in large and interconnected urban regions. This argument leads to Chapter 3, where the theory of the ‘urban region’ and the current paradigms of urbanisation are analysed.

## 2.1 What is a second-tier city?

Before going any further in the definition of our object of study, several questions need to be asked: what exactly is a European second-tier city? And do they all face the same issues or are some in need of more urgent attention? What influences this imbalance? It is necessary to ask this, as definitions change according to the perspective of the research, not to mention local history and political configurations. Simply put, second-tier cities are cities of recognisable importance and size which are not national capitals (politically) or global cities (functionally). Earlier research has defined them in two ways:

- A functional perspective, in which they are classified according to their size, economic role and functions, and the exchanges they produce with other cities, regardless of their political status and national contexts. In this case they may adopt the broader taxonomies of the global urban system, such as the ones created and updated by the GaWC group at Loughborough University since 2000. They are ‘secondary’ as opposed to ‘global’ or ‘world’ cities. This definition is widely used for large comparative studies involving many cities.
- A political-historical approach, considering their national role and political context. Second-tier cities are primarily regarded against the role of, and relative gap to, the national ‘first’ city. Such a straightforward definition is used in the 2012 ESPON study: second-tier cities are “*those cities outside the capital city whose economic and social performance is sufficiently important to affect the potential performance of the national economy*” (2012a: 1). Typically, they are smaller and of lesser political and economic importance than the capital, if the administrative boundaries of the ‘city’ are considered, but also at the scale of the agglomeration.

### 2.1.1 The functional definition

This specific use of the term ‘second-tier city’ is implied when it is no longer confined to its relative ‘secondness’ (Hodos, 2011) by comparison to the capital, but enters the larger hierarchic taxonomies of world cities. Here the terms become more diverse, and the classifications change according to the focus of the research – advanced producer services (APS) flows, international functions, accessibility by rail or air, among others. This approach tends to generate quantitative comparisons and rankings, what Hodos calls the ‘functional’ principle for defining global urban hierarchies (ibid.: 4), and included by Brenner in the notion of ‘encompassing comparison’, placing “*different instances at various locations within the same system, on the way to explaining their characteristics as a function of their varying relationships to the system as a whole.*” (Brenner, 2001: 137). Under this terminology, important second-tier cities can appear in the Beta and Gamma categories of the GaWC hierarchy (GaWC, 2014), as centres linking their regions to the world economy or important world cities whose major sector is not APS. Incidentally, the three national second-tier cities selected for this study appear at the Beta- (Antwerp), Gamma+ (Bristol) and Gamma- (Porto) categories (ibid.).

This perspective is often used in comparative research, with different quantitative thresholds: GaWC tables use APS flows and comprise hundreds of cities as different as Berlin and Bangalore. Rozenblat and Cicille (2003) base their comparison of European cities using population (over 200,000) as the main threshold, yet neglecting distinctive profiles of capitals vs. second-tier cities. The Urban Reports Symposium at the ETH Zurich (2006), explicitly addressed urban strategies and visions in ‘mid-sized cities’, and selected places as different as Amsterdam, Bilbao, Copenhagen, Dublin, Zagreb and Zurich, adding that they “*could equally have chosen Antwerp, Bologna, Helsinki, Lyon, Leipzig, Oslo or Thessaloniki.*” (Christiaanse et al., 2009). This is an example of focus on a layer of ‘secondary’ cities in which capital status is not an issue, but that is sufficiently close to a broad definition of the typical scale of second-tier cities, capturing well the wide space that exists between large metropolises like London, Paris, Berlin or Madrid and the countless smaller cities and towns in Europe:

*“[...] the mid-sized city as a type and an essential cornerstone of European urban life and culture. We focus on cities with conglomerations of approximately one*

*million people, [...] that are centres of economic, cultural and scientific activities in their respective regions, have an international airport and play an important part in the context of the international network.”* (Christiaanse et al., 2009: 7-8)

### 2.1.2 The political-historical definition

This definition provides the simplest case - a second-tier city is *not* the most important city in a country - but size, history and political circumstances make the term highly dependent on local contexts. To organize the amalgam of second-tier cities in Europe according to this perspective, Parkinson and his colleagues classify them in terms of different state systems<sup>7</sup>. Their argument is that “*governance matters and in particular the degree of deconcentration of investment and decentralisation of powers, responsibilities and resources*” (ESPON, 2012a: 5) - cities are necessarily constrained by their national contexts. Within this definition, and not considering countries so small that make a second city negligible, we can identify three important variants in Europe:

#### *One or several second-tier cities*

Most countries in this category (but not all) tend to be unitary nation-states (ESPON, op.cit.). There are countries where a single second city is clearly identifiable and others, normally larger nations, where several second-tier cities coexist. Both types can suffer from the presence of a dominant capital. The former includes Portugal (Porto), Belgium (Antwerp), Denmark (Aarhus) or Greece (Thessaloniki): all these cities promote themselves in tourism and city marketing channels as their nations’ second cities and all but Antwerp lie in centralised states with different degrees of local autonomy. The latter type includes countries like the United Kingdom and France, both unitary states, where there is a clear, dominant capital and a layer of comparable cities beneath it. An early study for the Core Cities Group (Parkinson et al., 2004) identified eight ‘core cities’ (Birmingham, Bristol, Leeds, Liverpool, Manchester, Newcastle, Nottingham, Sheffield;

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<sup>7</sup> The 2012 ESPON report groups EU countries under the following political systems: federal states; unitary ‘Northern’ states; unitary regionalised states; other unitary states – ‘old’ member states; and other unitary states – ‘new’ member states. For each system, there is an assessment of organisational features, trends in competencies and local revenues and autonomy (op.cit.: 5).

now joined by Glasgow and Cardiff), all sharing the feature of “*falling behind London*” (ibid.: 5) and analysed with the belief that “*capital cities are different in many respects from non-capital cities.*” (ibid.: 10). In France, Gravier’s *Paris et le Désert Français* (1947) was the first publication to address the excessive weight of Paris and the stagnation of the remaining territory, heralding later decentralisation efforts towards the first *métropoles d’équilibre* as identified by the French regional agency DATAR– Lyon-Grenoble, Marseille-Aix, Lille-Roubaix, Toulouse, Bordeaux, Nantes, Strasbourg and Nancy-Metz.

### *No clear second-tier city level*

Other historical and political frameworks provide little or no basis for a classification of second-tier cities. This does not mean that there are no imbalances among different cities in different areas, but there is no clear secondary level beneath a dominant capital. Switzerland or the Netherlands are cases of polycentric patterns with no clear dominant city but Germany is the paradigmatic example, putting together the appropriate political features (a federal state with shared powers between central and sub-central levels) and a territorial scale able to support several important cities. This creates a pattern of horizontal relations between cities, including the capital, in contrast with the primate patterns of most unitary states (Taylor, 2011). Parkinson and colleagues at ESPON agree that Germany is a case in point and provides important lessons:

*“Alongside the national capital in Federal Germany is a group of regional capitals with extensive decentralised powers and responsibilities. Economic activity – private and public – is more evenly distributed across a range of cities that form a powerful multi-cylinder economic engine.”* (ESPON, 2012a: 16)

### *Second-tier cities as pseudo-capitals*

Finally, there are countries whose internal political organisation or history creates the conditions for ‘pseudo-capital’ behaviour of a particular second-tier city, even if there is an official political capital. Examples are Italy and Spain, grouped by ESPON (2012a) under the ‘unitary regionalised states’ system. Taylor describes the “*longevity of its city-economies and relative recency of its political construction*” (Taylor, 2012: 1) to argue

that the true leading city of Italy is Milan, not Rome. Barcelona is the historical capital of Catalonia, and keeps an increasingly stronger autonomist discourse in Spanish politics; it does not face the same hierarchical relation to the capital as cities in France or the UK.

### 2.1.3 Selecting definitions for this study: a critique

The efforts to rank places according to abstract, conventional constructs such as functional hierarchies are widely contested. Eisinger writes that “*the economic validity of such cartographic exercises appears to be more than just vague [...] the same city may also be assigned completely different profiles due to specific emphasis and omissions*” (Eisinger, 2009: 27-28). As the next section will argue, the functional approach is often biased towards larger cities, and the indicators used to rank them are tailored to their preferences. This has produced a long history of conceptual devaluation of smaller cities in general, often constraining their possible visions to a set of ‘endorsed’ strategies (Van Heur, 2011). Massey (2005) suggests that whoever draws such tables is already making a biased political statement dedicated to reduce the importance of difference: core and periphery narratives lead to the ‘convening of space into time’, as places spatially distant from the ‘core’ are seen as temporally lagging ‘behind’. The immediate assumption is that the ‘less successful’ cities will be expected to be more like their stronger role models:

*“In brief, spatial difference was convened into temporal sequence. Different ‘places’ were interpreted as different stages in a single temporal development. All the stories of unilinear progress, modernisation, development, the sequence of modes of production perform this operation.”* (Massey, 2005: 68).

In addition, differentiating between urban profiles and detecting heterogeneity within urban areas has been described as a major problem of comparative research on cities, but the need to do that grows with the weakening of comprehensive state-driven planning in Europe, replaced by localised drivers of development, mainly of *ad hoc* private provision (Hague, 2006). In this context of enhanced diversity, the tools used by the functional definition often fail to differentiate between different cities beyond size and mass, thus affecting a proper understanding of their assets and weaknesses: they

seem more appropriate to develop rankings and quantitative measurements and present them as a homogeneous set of averaged data for the sake of quick and accessible comparisons (ibid.). In this sense, the political-historical approach is more sensitive to history, national contexts and local constraints, and seems suitable when the purpose is not a direct and measurable parallel between many cities, but rather an exploration of the reasons why a handful of them answer the research questions differently. And it seems that the different levels of economic success, living standards and policy priorities in second-tier cities are indeed related to their history (Hohenberg, 2004) and national urban systems (ESPON, 2012a). The following section will explore this issue to show that, given the aim and motivation of this thesis, the political-historical definition is necessary to select and understand the ‘second-tier city’ case studies.

## **2.2 The present state of second-tier cities in research and policy**

*“In presenting this story, we shall take note of the splendid traditions and terrible crises of individual cities and towns.”* (Hohenberg and Lees, 1995: 3)

### **2.2.1 Research bias**

On a purely methodological level, the option for a non-hierarchical and differentiated definition of second-tier cities corresponds to the intention to address them on their own terms, and not as sites ‘on the path to’ somewhere - namely global city status - measured against some external benchmark; for the purposes of this study, it is important to base our understanding of cities on specificity and context, thus avoiding the risks of methodological bias of functional definitions, as argued above by Massey and Eisinger.

Actually, not only in policy-making but also in research contexts, academics have often been dazzled by the overwhelming promises and problems of mega-cities, and the story of the ‘urban age’ (Burdett and Sudjic, 2007; 2011) is mainly told from that perspective: a tendency illustrated by the alarming amount of texts that start with some variation of the truism about how many people now live in large cities. Earlier literature has qualified this as a ‘metropolitan bias’ (Connolly, 2008): as the most comprehensive sources of urban research themes, scholars concentrate there as if other cities were, at



best, “*global cities lite*” (Hodos, op.cit.: 6) and urban life was uniform across cities of all sizes and types (Van Heur, 2011). As a result, just like in policy priorities, research on second-tier cities has often been made peripheral and restricted to hierarchic and generic frameworks of analysis that assume continuity across all cities.

Such hierarchic exercises are often tailored to fit the interests of their promoters. In comparative urban research, the choice of indicators often has less to do with the actual priorities of each city than with the sectors the main primate cities know they excel in, even if it is hard to recognise how these sectors have an actual impact in real places. Brenner’s interpretation of Janet Abu-Lughod’s *New York, Chicago, Los Angeles: America’s Global Cities* (1999) points out the relatively small effects of ‘global city functions’ in “*developments on the ground within contemporary cities*” (Brenner, 2001: 131), more related to the cyberspace realm where many operations eventually take place and with a small portion of the local population actually involved in such roles. Similarly to Massey, Eisinger, and others discussed above, the German BBSR report on European metropolitan areas (Göddecke-Stellmann et al., 2011) highlights the same issue. The authors claim that the conventional categories used to classify cities – decision-making and control, innovation and competition, accessibility and symbolism – are biased in favour of global cities and large capitals in Europe, despite keeping within the ranking logic, propose a new set of indicators covering many areas and functional strengths, a broad framework in which *all* cities can in theory succeed.

### *Entities, not entries*

While ranking cities can be very useful to compare a large amount of entries according to a large set of measurable aspects, what is interesting and worth critiquing is the rationale behind it, namely the assumption that ranking higher in particular items is always ‘better’ and that all cities aspire to climb to the top spots of the tables. These are the familiar narratives about worldwide urban hierarchies, dominated by a few command and control centres, with other cities “*on the receiving end of development*” (Connolly, 1998: 4). Such a principle builds rankings assuming that all cities aim to be on the path to global city status and to be more like their successful competitors. Second-tier cities are

therefore rendered truly ‘secondary’: downgraded and less successful versions of their larger counterparts, failing or succeeding according to how fast they are moving towards that status, and viewed through “*categories and hierarchising assumptions that have left poor cities playing a punitive game of catch-up*” (Robinson, 2006: 6).

To start, what is this other than the domestication of urban complexity into easily manageable containers? This discourse on cities sees them more as *entries* quietly sitting in a table than as *entities* pervasively evolving on a territory, and the outcome of the exercise is assigned meaning only “*because I provide it with the dignity of a formal system and because I treat it, in short, as the equal of a work of art.*” (Corboz, 1983: 29). If ‘the map is not the territory’, in Korzybski’s aphorism, much less is the table.

A second theoretical objection is that the assumed ‘quality’ of such domestication efforts lies not in how well they address the concrete questions – what is happening in this city? What can be done to support/prevent it? – but rather in the how effectively they work as rhetorical devices – who does this classification appeal to? Who is its audience? Is it ‘convincing’? Picking up David Foster Wallace’s comment on ‘genre’ literary criticism, city hierarchies based on a standard to be achieved by all can be “*the sort of thing someone who likes this type of thing is apt to like.*” (Wallace, 2000: 2263).

A final objection is that, while most scholars using these methods will certainly not succumb to simplistic methods, the competitive rationale behind them has reduced much urban policy discourses since the early 2000s (Turok and Mykhnenko, 2007) to an universalising set of one-size-fits-all statements, described as “*popular urbanology*” (Gleeson, 2012: 931): *all* cities are de-problematized into promises of economic dynamism and cosmopolitanism, sufficiently bounded and stable to have “*immanent trends, even laws, which define their possibilities*” (ibid.: 932). Gleeson’s critique is particularly directed at the ‘urban triumphalism’ of Edward Glaeser’s work (2011), seen as an apology of urban entrepreneurialism based on vacuous slogans and simple ‘rules’ for success. Restricting the explanatory power of urban spaces as sources of possibility, open-endedness and interdependencies, such approaches thrive on spatial determinism tending “*towards closure – urbanisation as destiny (and salvation)*” (ibid.: 936).

Several researchers have dismissed this methodology, commonly arguing for an account of difference and specificity of each city, and implying, even if not stating, that within that difference one can find both constructive and destructive potentials: cities are “*matters of concern, not matters of fact.*” (Latour, 2004: 231). Robinson (2006) defends that all cities are ‘ordinary’ and their paths should not be determined by a standard set by any other city. In the preface to Chen and Kanna’s *Rethinking Global Urbanism* (2012), Bunell and Sidaway resort to Robinson to stress the need to bring in the ‘less familiar cities’ and to “*resist the ingrained tendency to examine such diversity hierarchically*” (2012: xv). They ask how can questions “*arising from non-hierarchical and contextualised approaches to a world of cities form the basis of collective, relational comparative work?*” (ibid.: xvi) and suggest collaborative methodologies between localised (rather than globalised) scholars and institutions. They argue not only that the research focus should be removed solely from large global cities but also from western cities in general as a template to measure the world.

As an individual project, this study cannot use collaborative methodologies; it will also stay within the territory of Western Europe and use data coming from European institutions. But while the attempt here is not to escape from that framework, it is definitely to look beyond primate cities, and, most importantly, to avoid studying all others hierarchically according to their relative distance from those cities, and assuming their best options of development consist on being more like them. The diversity of urban and political contexts in Europe explaining specific city trajectories beyond the univocal path to ‘triumph’ is another argument to pursue this path, as we will now see.

### **2.2.2 Second-tier cities in the European urban system**

Europe is indeed characterised by a very tight network of cities, as any satellite photo at night can reveal. This is the continent whose culture and thought was literally formed, in the words of George Steiner, by *walking* from city to city (Steiner, 2004: 30). However, in many European regions, this tight and historically stable mesh has been losing population (Turok and Mykhnenko, 2007), economic weight (ESPON, 2012a) and political voice (Crouch and Le Galès, 2012), as European and national institutions tilt towards the largest cities in each country. Recent research argues that it is better for

national economies to invest in a wide variety of city sizes and types rather than primarily in a single dominant city (Dijkstra, 2013) but ‘big-city’ bias based on the tendency for political and economic power to cluster together has been an historical tendency since the emergence of European nation states (Hohenberg, 2004) and left visible marks in the state of second-tier cities today.



**Figure 2.1** – The different configurations of urban settlements in Western Europe, contrasting some relatively bounded nodes and many pervasive and polycentric urban networks occupying large territories (source: Google Earth screenshot, NASA layer).

In a continent featuring so much political, geographical and cultural variety and, particularly, so many different national urban systems, it should be expected that the economy and living standards of European cities vary substantially. And in fact, the recent ESPON report on second-tier cities (2012a) directly relates that variety with the different urban systems above: second-tier cities in countries with dominant capitals tend to suffer greater policy neglect and have a weaker economic performance than those in countries with more decentralised urban systems. Several reasons have contributed to this state of affairs, both today and throughout history.

Le Galès (2006) presents three long-term, historical arguments that will supposedly preserve the specific European model of tightly spread mid-sized cities from decline and avoid further convergence in a few, highly favoured mega city-regions: the role of the state and public investment in securing already existing locations and populations and inducing more long-term investments; the historical and territorial stability of cities older than their respective nation states, as sites of deeply rooted economic and social relations; and the existence of many highly structured institutions firmly anchored to local territories and populations. The co-existence of these factors with the forces fostering greater concentration in the largest cities is a key feature of Europe, according to Le Galès. However, one can suspect that the increasing demise of state abilities and powers, the corrosion of stable institutions and the weakening of social and economic bonds caused by the recent financial and social crisis in Europe – and its concrete impacts, such as unemployment, outward migration and lack of public investment – may compromise this model in the near future.

In fact, and especially in times of crisis, a popular saying that can often be heard in cities like Rotterdam or Porto when commenting on their role against primate cities like Amsterdam or Lisbon, is that money is being made in the second cities only to be spent in the capital<sup>8</sup>. Such voices are indicative of the general feeling towards the neglect of the second-tier cities' role in national economies. Throughout Europe, capital cities have often profited from centuries of accumulation of public investment – in most EU countries, the capital is well above twice the GDP of second-tier cities, in some cases with a proportion of nearly 10 to 1 to the nearest contender (ESPON, 2012a: 3-4).

Using population change as the single indicator, Turok and Mykhnenko (2007) noted how since the early 2000s the tendency for small and medium cities in Europe to grow faster than large ones, constrained by their problems of congestion and availability of space, has shifted in favour of the larger cities, then pulling further away from their national contexts. They argued that, more than any change in the fortunes of large cities,

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<sup>8</sup> This popular idea is articulated in different ways in European countries, especially in cases where there is an old and deeply embedded notion of a city of 'hard-nosed', practical work (Hall, 1998). Porto and Rotterdam are both port cities, with a strong industrial and mercantile past, and this common feature, in opposition to the history of political power in Lisbon and financial power in Amsterdam (and colonial ruling in both) may have enhanced this perception.

and assuming that population growth is a signal of urban economic health<sup>9</sup>, “*the slowdown in the growth rate of smaller cities was the key to this change*” (2007: 173). However, this is not a consistent trend, as shown by more recent work by the OECD (2012a) and Dijkstra et al. (2013) highlighting another reversal to this pattern.

#### *Policy bias at European and national scales*

Two scales of policy bias are relevant for this matter and explain the variability of performance of European cities. First, at the EU scale, prescriptions for polycentric development have been said to foster further concentration in each country’s dominant city (in cases where the national urban system allowed that hierarchy); second, the attention of many national governments tends to be deflected towards their own larger cities, favouring the ones that are already more successful at the cost of other places.

The European Spatial Development Perspective (ESDP), inaugurated in 1999, actively encouraged polycentric development. Hall and Pain explain that the program’s purpose was to promote “*alternative centres, outside the so-called ‘Pentagon’ [...] into ‘gateway’ cities outside North West Europe, many of which are national political or commercial capitals*” (2006: 4). However, this had a different impact at national and regional levels. ESDP policies proved to be scale-dependent and increased “*monocentricity in the developing peripheral regions of the EU [...] as capital and labour increasingly migrate to a few leading cities and so create regional imbalances between core and periphery within each country*” (ibid.). As the first layer beneath the ‘few leading cities’, second-tier cities are prone to be deeply affected by these imbalances.

After making a similar point about the scale-dependence of polycentrism, Gloersen goes on to argue that “*a territorial strategy with the objective of changing the European*

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<sup>9</sup> The authors argue (op.cit.: 167) that population change is both a *consequence* of urban conditions (available economic opportunities lead to greater propensity to move) and an *influence* on those conditions (resorting to evidence that population size and deep labour pools increase agglomeration economies and productivity). Of course, this must be framed by the definition and boundary of each ‘city’ – a core city continuously losing population may reflect no more than a redistribution of people and jobs throughout the urban region: if that scale is taken in consideration, the population may be actually growing or stable; if the urban region behaves like an integrated urban system – considering urban functions, commuting flows, administrative frameworks, etc. – conclusions about economic fortunes can better be drawn at this scale.

*urban hierarchy as such has little chances of succeeding, given the high degree of inertia of these systems.*” (Gloersen, 2006: 45). He proposes alternatives that facilitate the emergence of different models and specialised urban systems throughout Europe “*at all levels of the urban hierarchy*” (ibid.). That shift of focus emerging from the criticism of the first ESPON projects stressed the need to consider the different layers of the European urban system, leading to documents such as Barca’s report to the European Commission (2009) arguing for a place-based development policy in the EU rather than a spatially blind distribution of funding according to quantitative criteria. A place-based policy “*is a long term strategy aimed at tackling persistent underutilisation of potential and reducing persistent social exclusion in specific places*” (Barca, 2009: VII). In other words, EU policy seems to privilege approaches that work more effectively with existing assets over those constantly adding new ones: times of economic uncertainty may not be the best for *grands projets* and increasing competition between cities, especially those in close proximity. This implies conceiving urban territories as functional rather than administrative entities, adopted as a guiding principle by the new EU Territorial Agenda for 2020 dedicated to promote greater territorial cohesion (Doucet et al., 2014).

The second form of policy bias is the ‘winner-takes-all’ approach of many centralised national governments, whose attention tends to be deflected towards their own primate cities, favouring those that are already more successful at the expense of other places. Crouch and Le Galès (2012) develop this idea with examples drawn from Oslo, Helsinki, London and Paris. The argument is that, lacking the political structure and economic climate to support several important cities, governments focus investment in ‘national champion cities’ (usually capitals) as these are the ones in better position to compete internationally. Following the known principle of gravitational physics, large masses are the most attractive and the more they pull, the greater their natural impulse to keep pulling. Naturally, this leads to greater territorial asymmetries in each country. Against this, Dijkstra, at the European Commission, argues that the more developed EU states have smaller productivity gaps between capitals and other cities and “*investing in a wide range of city sizes, or a portfolio of places, can be more conducive to growth than primarily investing in the largest city*” (Dijkstra, 2013: 251).

### *Historical tendencies and contemporary marks*

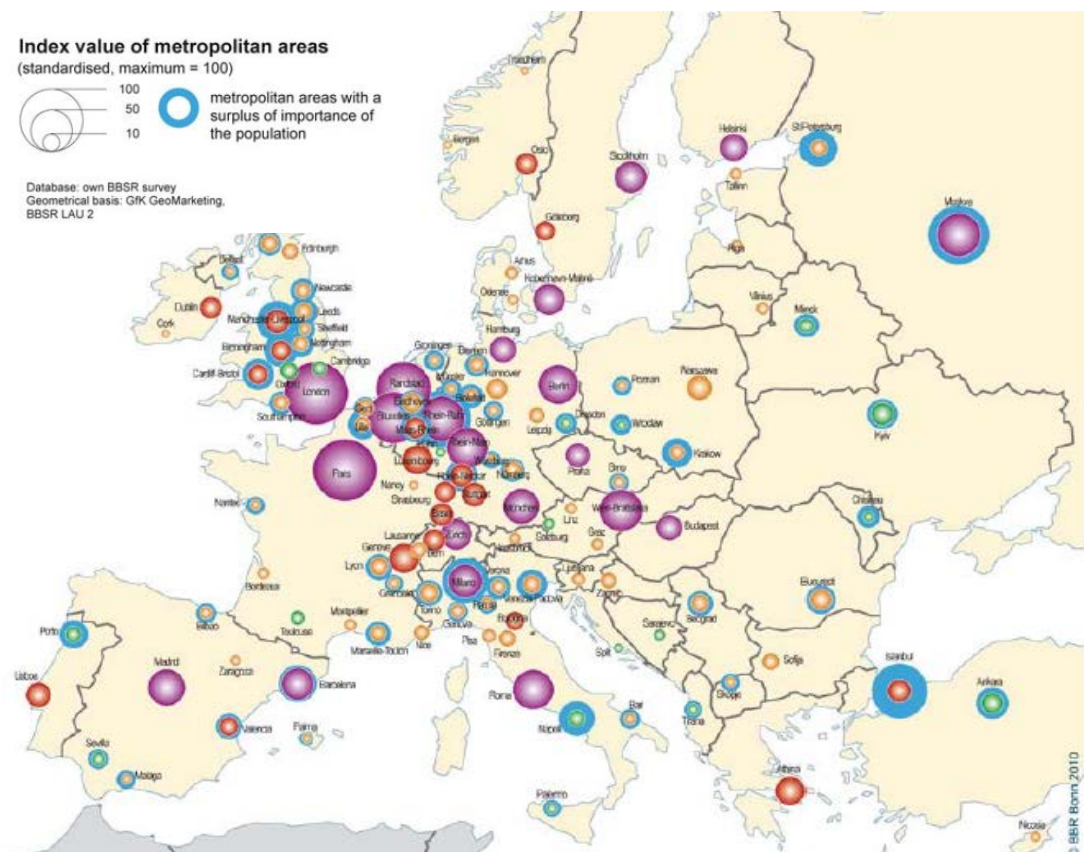
A historical perspective on these matters is offered by Hohenberg (2004), noting that the stability of city hierarchies is a constant theme in the urban history of Europe. He argues that as soon as absolutist states emerged in Europe, politically favoured capitals suffered great expansion in size and institutional weight, even if it did not correspond to true economic growth. Later, as industrialisation generated a new population increase in urban areas, political attention was further deflected to large capitals, as the places where both the political elites and the “*dangerous classes*” (2004: 3041) lived, and where the institutions managing industrial innovation were located. Hohenberg insists in his essay that large capitals tend to function in a ‘central place logic’, circularly justifying more dominance with their already dominant status, in line with the more contemporary examples presented by Crouch and Le Galès (2012); therefore, “*Europe’s cities and its urban system exhibit considerable path dependence*” (2004: 3024). Similarly, Hall (2006) writes that capitals sometimes grew by contingency out of absolutist states but later tended to attract all other activities that usually aggregate around political centres. The expansion of the service economy enhanced this tendency for agglomeration and functional dominance (2006: 10). Finally, Jane Jacobs adds, in a typically incisive manner:

*“It is obvious that the more transfer payments, subsidies, grants, military contracts and promotion of international advanced-backward trade, the greater the work and the prosperity in the capital city [...] Behind its busyness at ruling, a capital city of a nation or an empire, vivacious to the last, at length reveals itself as being a surprisingly inert, backward and pitiable place.”* (Jacobs, 1985: 231)

This historical tendency left its contemporary marks, the most famous being probably Zipf’s Law (Gabaix, 1999), plotting city populations in any given country as a typical inverse proportionality rank-size distribution stable in time. Yet, city population is an ambiguous issue in times of unbounded urbanisation, as chapter 3 illustrates. For the purposes of this study, a more relevant aspect of the imbalance between dominant capitals and secondary cities is the presence of important urban functions. A publication by the BBSR - German Federal Institute for Research on Building, Urban Affairs and



Spatial Development (Göddecke-Stellmann et al., 2011) calls our attention to the discrepancies between the demographic and the functional importance of some cities (focusing on ‘top-level functions’ in five categories). Functionally ‘underperforming’ cities provide their citizens and firms with less access to important functions than their demography suggests: *“compared with their population potential, the metropolitan importance is rather low [...] A reason may be that these areas either have further development potentials or that their metropolitan importance is historically undermined.”* (ibid: 102). In figure 2.2 (ibid: 103), we observe that, except for some Eastern European capitals, most cities facing this condition are second-tiers (circled in blue): Porto but not Lisbon, Manchester but not London, Lyon but not Paris, Krakow but not Warsaw. As explained above, countering these shortcomings is an important motivation for the argument being developed in this research project.



**Figure 2.2** - European metropolitan areas with fewer metropolitan functions than expected from their size and population are circled in blue. Other colours classify functional variety, ranging from purple (high) to green (low). (Source: Göddecke-Stellmann et al., 2011: 103)

### 2.2.3 Delimiting the political-historical definition

We have seen that functional categorisations do produce ‘primate’ and ‘secondary’ cities, according to size and functions, but fail to address the specificity of each city and assume that the underdogs mainly aim to keep up with their larger counterparts. They also fail to consider national political contexts to classify cities as first- or second-tier. The previous section tried to show how such contexts influence the conditions and options of second-tier cities and thus justified the relevance of a political-historical definition. But a further delimitation must be added that relies on the ESPON (2012a) findings about how those differences express the contrast between centralised states with dominant capitals and more polycentric urban systems. In fact, so many European countries of the former category have consistently exhibited such a visible political and economic bias towards their capitals that the reasons for finding development alternatives for second-tier cities are not the same in countries lacking that constraint.

Therefore, and considering the three variants discussed above within the political-historical definition, countries clearly harbouring one or several second-tier cities (i.e. a dominant capital) provide more appropriate case studies for the detailed empirical work. ‘Secondary’ cities, by any criteria, in the other two categories experience less imbalances, as some recent evidence illustrates (see figure 5.1 discussed in depth in chapter 5): GDP discrepancies measured by the ESPON report on second-tier cities (2012a: 4) show that these cities have very different relations to capitals and national averages according to the variant where they fit. Germany and Italy are the only countries in the study where the GDP in PPS of the largest second-tier city is larger than the official capital. Spain and the Netherlands follow this trend, with the GDP of the ‘second city’ approaching 80% of the capital. All these countries either lack a clear dominant city or have ‘pseudo-capital’ second-tier cities, as per the categories defined earlier in this chapter. In most other EU countries – mostly unitary states – the capital is well above twice the GDP of the strongest second city, in the most extreme cases in a proportion of nearly 10 to 1. The authors add that “*in countries which are less centralised and less economically concentrated, and where cities have greater powers, resources and responsibilities, [second-tier] cities have performed better and helped the national economy more.*” (ibid.: 5), while “*in too many countries, the capital city plays a huge role in the national*

*economy and second tier cities do not contribute enough. They punch below their weight.*” (ibid.: 3); and “*there is a risk that the gap between the more and less successful cities across Europe will widen in the future.*” (ibid.: 6). As far as this study is concerned, those are the cities in need of deeper attention and more imaginative alternatives: the omission of this criterion would mean a departure from the motivation of the research. The empirical findings in chapter 6 will illustrate this by running an analysis based on the presence of urban functions, and assessing how much being a second-tier in a mono- or polycentric country matters.

In summary, this thesis tries to avoid primate city bias in policy and research, to focus on the specific issues and distinctive features of second-tier cities. It uses a non-hierarchical and contextualised definition to identify and select second-tier cities, differentiating rather than equalising, and explicitly addressing the specificity of each urban context. This suggests an overarching option guiding the research: the aspects through which the specificity of second-tier cities will be explored are neither generic features that just happen to have a second-tier city as their empirical focus, nor issues that have been studied for the all-encompassing global cities and are now downgraded to check their validity in other settings allegedly ‘lagging behind’<sup>10</sup>. Instead, the exploration is based on criteria argued as particularly relevant for second-tier cities, especially in cases where they face large dominant capitals and are embedded in larger urban regions, as appropriately framed in the introduction. Such an approach should not stop at the level of quantitative comparisons and must be grounded by an exploration of the particular histories and features that put them into the perspective of each case study. That perspective will be based both on how much each second-tier urban region conforms to and departs from general models and assumptions about socio-economic, functional and institutional configurations. That will hopefully be visible in the empirical chapters that follow.

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<sup>10</sup> For such a ‘downgrading’ method explicitly applied to a very similar topic – processes of metropolisation in European regional capitals – see Roger, 2007. The argument of the author is that the phenomenon has been widely studied for very large cities, but meanwhile smaller places (regional capitals from 500,000 to 1 million inhabitants) ‘also’ (i.e. ‘later’, in a still incomplete way) began to suffer metropolisation processes.

## 2.3 The *examined life* of second-tier cities: a literature review

Now that the reasons to focus on second-tier cities have been summed up, the specific use of the term has been clearly defined, and the policy and research failures affecting them have been detected, it is time to look at what earlier research says about them and what is still missing. In line with the theoretical framework discussed above, this section will stress approaches that build on qualitative differentiation among cities rather than quantitative equalising and thus see second-tier cities as a specific research concern; however, it will also explore the limits of the generalisation of the ‘second-tier city’ as a discrete category. The points to be made are, first, that there is a rich theoretical framework supporting the chosen methodology; and, second, that within this analytic paradigm, the attention of earlier research to second-tier cities has focused on a handful of thematic perspectives and left behind some pressing issues that are very important at the present time and under the current conditions of urbanisation in Europe.

### 2.3.1 Why should every city be different?

The trend of thinking that celebrates difference rather than similarity is the basis of some interesting research on second-tier cities. Being such a wide-spread condition in Europe, it follows that a contextualised research on such cities will most certainly uncover a world of new insights, nuanced by the endless political, cultural, economic, historical and linguistic particularities that construct the continent. The key point to consider is that second-tier cities, or mid-sized cities in general, are not small-scale replicas of large metropolises, with the same but downgraded features and similar but less complex challenges. Hodos justifies his study of ‘second cities’ stating that,

*“The difficulty is that very little existing scholarship has actually examined ‘non-global’ cities explicitly or analysed what alternate pathways of globalisation might exist. The notion of second city is one way to fill that broad space between the global city and the hopelessly marginalised city, [...]. It enables a more complex and fully elaborated understanding of the global urban system than we have been so far able to capture or describe.”* (Hodos, 2011: 7)

This view agrees with several others interested in putting the distinctiveness of cities first and warning about the problems of neglecting that notion. Van Heur writes that “*imaginaries tend to assign particular positions in the global economy to cities ‘small’ and ‘big’, which constrains the kinds of strategies imaginable for small city development*” (Van Heur, 2011: 2), making a very important point that relates to Massey’s view of the constraining force of maps and descriptions of the world according their embedded ideology (2005). Connolly reminds us that few dedicated studies have differentiated their specific research object in meaningful ways: “*This relative neglect of small and mid-size cities constitutes a significant gap in our understanding of the urban experience, particularly in light of recent demographic trends.*” (Connolly, 2008: 6). He argues that smaller cities differ from large metropolises in issues like greater independence from state authority, less benefits from national policies, fewer resources to cope with economic transformations, greater access to political officials and greater sense of identity.

A parallel discussion about the relevance of differentiation addresses the question whether cities are actually becoming more similar or more different. While some local specificities still resist, writes Mimica, “*the newly emerging generations of city-dwellers, from Lisbon to Vladivostok, do have an increasingly similar consumer-oriented value system*” (Mimica, 2009: 52), citing Rem Koolhaas when he points out that cities turn undistinguishable and generic also due to the lack of engagement of planners: “*architects and urban planners stopped thinking at precisely the same time that the city is being constructed all over the world.*” (Koolhaas, in Mimica, 2009: 52). This highlights the apparent convergence of ambitions and decision criteria in cities, a trend that can be all too easily detected in the ways city marketing officials try to sell their cities through easily recognisable channels and discourses even if they are actually emphasizing their own, inimitable assets. This new urban advocacy, part of the critique of the functional, rank-based understanding of cities discussed above, “*appears weak on epistemology and strong on conventional wisdom*”, according to Gleeson (2012: 933).

The so-called homogenisation thesis has been a prevalent trend but it is strongly attacked by many authors. McNeill directly engages with it to stress the specificity of ‘the’ European city and of each individual city in Europe. Like Robinson (2006) and Chen and Kanna (2012), but considering the European context, he criticises the methodological

problems of over-generalising from paradigmatic cases of scholarly research, writing that “*there are considerable dangers in examining cities through the lens of one very particular example*” (McNeill, 1999: 143). Naturally, those dangers also appear when using the lens of a mythicized ‘European city’. When Van Heur inquires on the specificity of small and medium cities, he agrees that to pursue that question one must choose “*a historical-geographical mode of analysis sensitive to the local specificities of particular cities*” (Van Heur, 2011: 7). This does not mean that similar ‘global’ behaviours, products, spatial forms and patterns have not penetrated most cities of the Western world, but McNeill suggests that exactly for that reason “*the range of experiences open to us in the contemporary city has increased*” (McNeill, op. cit.: 145), as they are changed by the particular contexts of each place, and given back to global flows with new and particular twists. As Massey puts it, local and global are co-constitutive: “*There is an overwhelming tendency [...] to imagine the local as the product of the global but to neglect the counterpoint to this: the local construction of the global.*” (Massey, 2005: 101). McNeill wraps up these tensions with a positive note, stating that “*as Europe is a continent awash with particularisms [...] with differing histories [...] its cities can be viewed as containers where the complexities of globalisation can be read most effectively*” (McNeill, op. cit.: 146). This ties up rather conveniently with Hodos’ quote opening this section that considering second-tier cities will allow a more nuanced and complex understanding of the global urban system than one merely based on a handful of very large and powerful cities.

McNeill concludes with a warning about the dangers of ‘travelling theory’, meaning that while a lot of urban research is place-specific, theory keeps invoking the same stereotypical places to support its claims. Diener and his colleagues see such theories as generalisations of spectacular cases that neglect contrary examples and ambiguous situations. Therefore they present their study about urban Switzerland (2006) under the premise that the detection of differences rather than similarities should be called for as a methodology for urban research. Amin and Thrift sum up the particularity of cities, writing that they lost all structure and territorial integrity, “*yet we still name cities and think of them as distinctive places*” (Amin and Thrift, 2002:1).

### 2.3.2 The specificity and limitations of city categories

The attention to difference and the need to address different types of city on their own terms reminds us that general categorisations of second-tier cities are no more valid and less abstract than general categorisations of other cities. Earlier research confirms that there is no homogeneous set of such cities sharing universal features, as there is no homogeneous group of global, medium or small cities. There is some futility in the attempt to “*position small cities as categorically different from other cities [...] such an attempt makes no sense.*” (Van Heur, 2011: 14). Exploring similarities and differences between cities with important common features does not correspond to a universal categorisation of such cities valid everywhere (Mommaas and Van Boom, 2009). Also Peter Hall started his intervention in a conference by pointing out that:

*“I started, as I suppose we all started, with a certain built-in assumption, almost a built-in prejudice, that these medium-sized cities would provide some models of sustainability. I wasn’t quite so sure when I finished. Some of these cities seemed to be doing better than others, and it seemed that their successes had to do with quite distinct features in their geography, [...] I think that if you extended the analysis from medium to large cities you might get the same variation; and there certainly wouldn’t be a clear and unambiguous relationship between environmental quality and size.”* (Hall, 1997)

The relationship between conventionally constructed categories and specific cases is not unambiguous at all, indeed. Second-tier cities have distinctive characteristics that separate them from small towns and large metropolises, but they are also different from each other and heterogeneous within themselves. Hodos warns about the

*“generalisability of the second city category [...] However I would caution against relying on a scale like this one as anything more than a heuristic device; in fact, the argument [...] is that single indices or metrics may conceal as much or more than they reveal, and that analyses are often better off thinking in terms of qualitatively distinguished types [...]”* (Hodos, 2007: 330)

Following this methodological tradition, this study does not claim generalisability either: it explores the research hypotheses where they seem most evident and can be argued as especially relevant for the cities in question, hoping that they open up a path for similar inquiries in other places. Qualifying the ‘second-tier city’ category as a universal framework whose rules should be followed by each individual instance is not the purpose of the thesis. Rather than abstracting towards a general nature of second-tier cities, here the concept is also a kind of heuristic device, a point of departure which helps to recognise and summarise sufficiently proximate features and problems in a set of places, and define a ‘region of variability’ where other cases probably operate. A universal typology of second-tier cities and an irrefutable proof of their distinctive nature are arguably not achievable and certainly outside the scope of this study. What is at stake here is putting together a set of cases sharing certain features, inquiring on the different ways they answer the research questions, emphasising their peculiarities and assessing what that can tell us about the features and alternatives of European second-tier cities today. In this sense, the method of comparative analysis used is close to the ‘individualising’ and ‘variation-finding’ comparisons, as proposed by Tilly (1984) and updated by Brenner (2001). Particularly the latter method – incorporating the global, national and local and relying on history – has been argued as urgently needed in urban research, “*a new style of world city comparison which is causally messier, more sociologically complex and more contextually embedded*” (Brenner, 2001: 144).

### **2.3.3 Why are second-tier cities different? A survey of historical similarities**

We have seen that there is a rich theoretical body of work arguing difference and individuality as the ‘common’ feature of all cities and as a relevant research method. And, within certain limits, it is useful to frame a set of cities sharing common features and problems within a general category, accepting that it is the examination of “*systematic differences among instances*” (Tilly, 1984: 82) that will allow us to qualify not the rigid category but, more interestingly, its embedded “*principle of variation*” (ibid.).

If variation prevails over systematisation, it is unsurprising that there is no general perception of a national second-tier city other than it falls behind the capital in some



way, at least in countries enabling such hierarchies. Second-tier cities lack the economic and political weight of large capitals; they are the cities which are *not* the nodes of global decision-making and often lack the economic structures, political institutions and urban functions proper to their population and history. These are cities where the great things that attract global attention are *not* happening.

However, some of them are also described as cities that celebrate their ‘secondness’ (Hodos, 2011), and build upon their usually long history as a viable alternative to capitals. These are cities whose tractable size give them a more human scale, less chaotic infrastructures and less extreme inequalities - ultimately bringing them closer to the myth of the archetypal ‘European city’. Several authors point out historical differences that illustrate this: against claims of completeness and dominance of large capitals, relying on centuries-old concentration of power and the ballast of national identities, these were often the cities distant from the circles of power, with a lesser presence from the state and state-driven economy (Connolly, 2008) and more detached from its official symbolic narratives (De Long and Shleifer, 1993); cities relying on international trade (mainly maritime – very often lying near an estuary or river) and thereby permeable to foreign cultural influences, producing more unique and forward-looking discourses when compared to their national contexts (Umbach, 2005); and following a pragmatic style of governance based on interests and rights rather than blood and tradition (King, 2010) that fostered autonomic traditions and the creation of international linkages and networks such as the Hanseatic League<sup>11</sup>. As chapter 5 will show in greater depth, the cities of Porto, Bristol and Antwerp, commercial port cities of ancient origins, fit well into this description. Indeed, Lichtenberger (1970) notes that as early as the Middle Ages, a dense network of such cities had been created in Europe, that flourished before the emergence of the nation-state bent them under its authority.

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<sup>11</sup> Actually the Hanseatic League was created, financed and powered by merchants’ associations rather than city authorities – and “*prospered for 300 years before the rise of the nation state led to its dissolution*” (Halliday, 2009). Loren King argues that only the ethos of cities lacking “*either military garrisons or the grander territorial ambitions of characteristic of more cosmopolitan capitals and imperial cities*” (2010: 130), due to weaker economic means and political power, could motivate the path of pragmatism and international networking abilities supporting such models.

Unconstrained by old traditions and developing more open and pragmatic societies, such cities were sites of practical innovation different from their larger counterparts: “*not the great capital cities [...] cities where people had to earn their living the hard way, and where in consequence their energies turned naturally from philosophical reflection and artistic creation into new, more hard-nosed directions*” (Hall, 1998: 9). However, the absolutist state, first, and the industrial age, then, seem to have cut off some of their aspirations: initially, because formerly semi-autonomous and prosperous ‘merchant’ cities (Antwerp is a typical case) became subject to “*the command of the ruling prince or the possibility of ruinous taxation*” (DeLong and Shleifer, 1993) and thereby their economic agents lost the appetite for risk; later, because secondary cities lacked the infrastructure needed to support population growth and could not fight the tendency for aggregation of political and economic power in primate cities:

*“In systemic terms, the single greatest change was a fusion at the top. National capitals tended to add network leadership to their central place functions, including international finance and cosmopolitan exchanges of information and functions. [...] banks bearing their provincial origin in their name – Dresden, Lyon – moved their headquarters to the capital.”* (Hohenberg, 2004: 3040-3043)

The question is whether such trajectories result in a socio-cultural profile that is relevant today: is there a contemporary version of the second city spirit? Hohenberg (2004) notes that in present economic conditions, second-tier cities with a cosmopolitan identity, a history of permeability and strong network ties could actually benefit from increasingly loose ties to capitals and territorial states, especially cities with “*both a strong regional role and a real cosmopolitan reach*” (2004: 3049). Appropriately, his main examples are German, Swiss and Dutch cities (i.e. countries lacking a dominant capital). Given the theme explored here, can cities close to this profile also engage more successfully in integrative processes of urban regions? Can their history of networking and lack of a centralist culture of political and economic dominance of the regional hinterland support the conditions for a more horizontal integration in the region, making actors elsewhere more inclined to engage in the process? This view will loosely support the exploration of what cities ‘do about’ their integration potentials in chapter 9.

#### 2.3.4 Trends of current second-tier city research

Against a hierarchical and generic view of cities across the world, the fundamental features that distinguish primate and second-tier cities have been made explicit before, with more or less claims for generalisation. Earlier research has been quite interested in differences of economic activity, historical and social trajectories and relation to urban governance and national political systems. The concerns about their economic performance and the available strategies to enhance it have been particularly articulated, from regional, national and European practices to issues of local agency and leadership (Christiaanse et al., 2009; OECD, 2011; 2012a; Cox, 2012; Parkinson et al., 2015). In Europe, the recent ESPON report (2012a) is bound to be a central reference, but, as far as policy is concerned, it focuses mainly on strategies emanating from higher levels, starting with key messages for city-region leaders, national governments and EU policy-makers.

Outside Europe, Markusen, Lee and DiGiovanna provide examples of economic growth in second-tier cities in the United States, Brazil, Japan and South Korea. In these countries, “*newer, smaller cities have been growing at the expense of older, larger ones, upsetting urban hierarchies.*” (Markusen et al., 1999: 3), in direct opposition to the tendencies detected by European-based research<sup>12</sup>. This work formulates some early proposals about policy and analysis frameworks for second-tier cities, establishing typologies of their economic structure and asking crucial questions, such as why some cities succeed in achieving fast-growing second-tier status and others not, how many second-tier cities can a country support, and whether the economic success of some cities harms the prospects of others. In line with the perspective of putting specificity and local context and agency ahead of large-scale, hierarchical forces, they suggest that:

*“[...] similarity of second tier city structural types across nations and stages of development is less the result of the globalization of capital and trade, dysfunctional primate cities, or post-Fordist imperatives than of democratizing impulses and conscious choices by nation-states and political decision-makers including regional, industrial and infrastructural policies.” (ibid.: 14)*

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<sup>12</sup> The argument that second-tier cities are losing ground to increasingly dominant primate cities seems to apply mainly to certain regions of Europe. As discussed at length above and supported by ample evidence, exceptions apply, particularly in cities in Germany, Netherlands, Italy, etc.

A different strand of work has focused more on the cities' own agency and how to profitably explore the historical differences between second-tier and primate cities, exploring how they achieved their status, what they do to update it and how they use their individuality as an asset to build on. Hodos' work (2011) gives an account of these processes in Manchester and Philadelphia and distils two strategies typical of second-tier cities: building a strong second-city identity through large-scale events and initiatives as a way to improve their symbolic position, and investing in transport infrastructure as a way to enhance their material position.

After justifying the relevance of differentiating them, Hodos goes on to describe the specific features of second-tier cities. They have "*persisting, ongoing global interaction across several social spheres*" (2011: 5) without being global cities *per se*; and can be prominent in "*manufacturing [...], international migration, cultural innovation and production, but not international finance*" (ibid.: 6). Hodos considers the lack of a strong financial sector one of the decisive issues separating second-tier and global cities. Second cities also "*engage in repeated efforts to build transportation infrastructure to enhance their global connections and [...] gradually elaborate a specifically second city urban identity through giant cultural planning projects*" (ibid.: 6). The actual scale of the projects implemented in second-tier cities certainly depends on national contexts and economic conditions, but one should be reminded that Hodos is addressing 'top-level', prosperous second cities, and strategies viewed over a long historical period (roughly from the 19<sup>th</sup> century to present time), designed for times of economic prosperity and assuming a strong role of comprehensive state-led planning.

In line with Hohenberg's suggestion that secondary cities can benefit from that profile today (2004), Hodos also seems to believe in a contemporary 'Hanseatic' spirit: he highlights the fact that the cities' own agency, as wide-ranging as possible, is more important than any kind of intervention from central or global powers: "*the recent and increasing openness of national urban systems gives greater latitude for direct international linkages on the part of lesser cities*" (Hodos, 2011: 6). He goes a long way to describe what his case study cities did to take action on their own behalf, calling such efforts "*municipal foreign policy*" (ibid.: 15) that aims foremost to establish a clear second-city identity, often through "*claims of a glorious past*" (ibid: 18). This is the

‘symbolic position’ path: being the second city is openly celebrated and compared favourably to other secondary cities and large capitals. The ‘material position’ path embodies this spirit and aims to fully integrate secondary cities in international flows through enhanced accessibility and centrality – from optic fibre to high speed trains, airports and motorways. Again, the shadow of the former glory of semi-autonomous, international and networked cities lurks in these discourses.

However, one should note that “*today’s cities are not only juggling for position in the global context, but also simultaneously attending to local economic, ecological and social needs*” (Christiaanse et al., 2009: 7). The strategies reviewed above are more related to a city’s status and prevalence in national and international contexts and sometimes lean towards the hierarchical views which assume that secondary cities are simply trying to become less so. Such strategies strive for economic success by ‘adding’ something – transport infrastructure, cultural extravaganzas, extensive renovation, etc. – but these are options which the present economic conditions in many European countries do not favour, considering the austerity measures imposed on local government budgets. Note that Hodos’ celebration of ‘secondness’ is illustrated by top-level second-tier cities: many others cannot afford such prominence. Therefore, there is a pressing concern for an alternative rationale of achieving a future vision by reorganising and enabling existing resources. Whatever unexplored issues there might be for second-tier cities in Europe, it is important to take this into account; the argument for integration developed here also implies gathering resources from a wider region into a more efficient framework.

The research by Christiaanse et al. (2009) is broader and analyses the strategies used by mid-sized cities both to attend to the demands of international competition and support their local needs. The authors highlight four dominant instruments, including surgical *grands projets* (from the Bilbao Guggenheim to the Oresund Bridge), part of the ‘additive’ strategy discussed here, but also a stronger role for strategic planning, urban development agencies and stakeholder participation. Yet, like Hodos’ account and most of the research discussed above, this view is still about the archetypal ‘European city’, a bounded, discernible agglomeration whose distinction from the generically ‘urban’, not to mention the ‘rural’ is clear. The ‘proper’ city understood in a culturalist way, the *locus* of political decision, historical events and urban life – an approach that Brenner has

labelled as ‘methodological cityism’ (2014), unable to unbound the ‘city’ to the scale of urbanisation. This must be re-examined today, as cities have expanded or coalesced into urban regions and “*the effectiveness of these four instruments on a regional scale remains questionable and very dependent on political consensus*” (Christiaanse, 2009: 20). The gaps in second-tier city research at this scale are the theme of the next section.

## **2.4 Conclusion: the unexplored features of second-tier cities**

This chapter has shown that, although second-tier cities can be defined in several ways, a political-historical definition is more useful for the purposes of this study. This is due to a methodological approach that privileges an understanding of cities as individual entities rather than ranked entries, but also because evidence from existing research shows that the state of second-tier cities across Europe varies widely according to their historical trajectory, current policies at several scales and the shape of their national urban systems. Such individual differences restrict the generalisability of the second-tier city category, but earlier literature has made some efforts to reveal the common features of these cities. Such efforts have produced important knowledge but have mostly failed to address the urban region scale and differentiate second-tier urban regions in meaningful ways.

The questionable effectiveness of the development strategies of second-tier cities at larger scales and the tendency of scholars to look at them as culturally and historically bounded sites becomes more problematic alongside the emergence of the ‘urban region’ as the preferred scale for policy intervention and urban research. Indeed, both second-tier and primate cities produce and are embedded in polycentric and interconnected urbanised regions, but this has been mainly studied from the perspective of expanding global metropolises (Sudjic, 1992; Scott, 2001; Burdett and Sudjic, 2007; 2011) or ‘polycentric urban regions’ based on the fusion of a set of similar centres (Dieleman and Faludi, 1998; Parr, 2004). Few attempts of explicit differentiation of second-tier urban regions have been made, beyond ‘downgrading’ the observations made in larger places to test their validity elsewhere (Roger, 2007). In fact, the increasing integration of urban regions is largely seen as a *general* tendency of *all* territories, whose underlying drivers and features vary only in intensity (more or less ‘advanced’, leaning again towards the

rank-based mentality of functional definitions). But little attention has been given to the fact that there can be essentially *different* spatial features and integration processes in urban regions, beyond the monocentric-hierarchic vs. the polycentric-networked duality (Burger et al., 2014), and even less that second-tier urban regions could be a specific research and policy problem in this regard.

In summary, and while the specific features of second-tier cities and their contrasts to primate cities and capitals have been viewed through the various lenses summarised above, there is not much literature analysing spatial differences, in aspects like functional organisation, demographic change, socio-economic arrangements and institutional relations, that can be associated to a specific configuration of second-tier urban regions and characterise their integration processes. Yet, as the introduction has tried to explain and the next chapter will reinforce, these are exactly the aspects whose specific features may affect the shape of integration processes and the success of integration strategies. Earlier studies do suggest that there may be detectable patterns of difference in this respect. Markusen's typology of the spatial arrangements of firms in second-tier urban regions discussed above (1999) is a relevant example, as well as Hohenberg's view of dominant capitals expanding in a hierarchic 'central place' manner and smaller cities developing in a more networked and horizontal model (2004), or the distinction between 'spiderweb metropolises' around 'first order' dominant cities and 'networked metropolises' elsewhere proposed by Heynen, Loeckx and Smets (1991). Perhaps the more explicit attempt at a more nuanced differentiation of urban region structures, notably by suggesting a relation between the historical progression of urbanisation and contemporary functional and socio-economic arrangements has been Champion's three-tier typology for the development of polycentric urban regions through centrifugal, incorporation and fusion modes (2001).

These fundamental contrasts should have visible spatial manifestations in the aspects highlighted above. These are all key drivers of (or barriers to) urban growth and metropolitan integration and the shape they take influences the conditions, speed and potential success of such processes. Therefore, the relevance of comparing different contexts to uncover what distinguishes second-tier urban regions and their integration processes lies in the fact that the differences detected will demand analytic frameworks

and planning options specially tailored for those urban regions rather than downgrading observations and adapting strategies primarily suited for other places.

Exploring the specificity and variation of functional, spatial and institutional features in second-tier urban regions and suggesting how they may or may not provide fertile ground for integration processes at that scale are the tasks of this research project. But before, chapter 3 will review the existing theory about the 'urban region', a policy, functional and institutional space emerging from the ubiquitous presence of extensive urbanisation; introduce the concept of 'metropolisation' as a lens through which the integration of urban regions beyond a 'city-first' bias can be understood; and set the scene for the analysis of the specific nature of second-tier urban regions. This will define the research terms more firmly, expanding and adding precision to the argument of this thesis and preparing the ground for the empirical chapters that follow.



### CHAPTER THREE.      The territories of extensive urbanisation

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*“Economic and technological transformations have physically and functionally integrated spaces, up to the point that economic activities and urban ways of life have spread over the totality of the territory.”* (Nello, 2001: 18; my translation)

The polysemic notion of the ‘urban’ and its qualifiers illustrate no more than “*the dominant mode in which each society territorialises*” (Domingues, 2008: 1). Like other cities, second-tier cities produce and are embedded in much broader urbanised regions and virtually all of them have now turned into large interconnected functional areas of some kind. ‘Extensive urbanisation’ is a synthetic image – and an umbrella term – used here for the processes of reconfiguration of large territories in which different forms of urbanisation penetrate urbanised as well as formerly rural or natural spaces, loosening hierarchical relations between ‘centres’ and ‘peripheries’, transferring specialised activities to emerging and often remote nodes, and dispersing people, jobs, activities and built-up space throughout the urbanised region. This is not only a one-way process of ‘urbanisation of the rural’ but rather a convergence of the meaning of both urban and rural, as formerly compact cities and suburbs are also heavily reconfigured by spatial diffusion and functional decentralisation. In any case, these processes have overridden once accepted divisions and replaced the ‘city’ as a coherent and bounded entity by a notion of an omnipresent and diffuse ‘urban landscape’, dense and consolidated in some regions, less so in others, but inhabited overall as potentially urban space. The ubiquity of the urban, which is not only the bounded space of the built environment but also the unbounded space of lifestyles, flows of people, goods, information and economic activity, has given rise to proposals for an “*urban theory without an outside*” (Brenner, 2014: 15), based on Lefebvre’s early argument of a fully urbanised society: “*In this sense, a vacation home, a highway, a supermarket in the countryside are all part of the urban fabric.*” (Lefebvre, cited in Brenner, 2014: 38). Since the 1970s, this emergent vision has turned into an everyday reality, supported by the ubiquitous presence of physical and immaterial infrastructure enabling urban-like activity almost everywhere.

To address this proposition further, this chapter reviews a wide range of theories on the extensive urbanisation theme. Section 3.1 starts with a discussion of competing definitions of the ‘urban region’, namely regarding incompatible forms of delimitation, conflicting planning options and conceptual inaccuracies. Accepting the limitations of existing definitions, section 3.2 goes on to distil four distinctive features of the often imprecise and over-generalised concept of extensive urbanisation – the ubiquity of centrality, the inner imbalances within the apparent territorial isotropy caused by the progression of the ‘urban’, the resulting dispersion of population and built-up space, and finally the difficulties in governing unbounded and poorly defined urban regions. They help frame the empirical work that follows, in the sense that the aspects that may best illustrate the specificity of second-tier urban regions can be seen as manifestations of these features. The next question is what perspective on the integration of urban regions best describes the processes happening in territories characterised by such forms of extensive urbanisation. Section 3.3 introduces the concept of metropolisation, discussed as an appropriate interpretative lens for this purpose, and shown to describe both a territorial process of spatial, functional and institutional integration of urban regions and a development strategy harnessing that objective. The genealogy and distinctive features of this concept are evaluated, namely the shift from a core-periphery notion of cities dispersing into urban regions to an integrative view of urban regions consolidating into ‘extensive cities’. Finally, the link between metropolisation as a way to describe and envision integration processes and the features of second-tier urban regions will be explored in the concluding section 3.4, elaborating on the concepts discussed in the introduction. The theoretical framework thus built by chapters 2 and 3 supports the elaboration of the research design in chapter 4.

### **3.1 Framing and defining extensive urbanisation**

*"It is not too much to say that the London citizen of the year 2000 A.D. may have a choice of nearly all England and Wales south of Nottingham and east of Exeter as his suburb [...] the country will take to itself many of the qualities of the city. The old antithesis will indeed cease, the boundary lines will altogether disappear; it will become, indeed, merely a question of more or less populous." (Wells, 2008 [1902]: 774-775)*

*"The plain looks bleak as its stubble and barns / And the farms whose pine trees are rotten / The plain looks bleak and tired and fights no more / The plain looks bleak and dead - the city devours it."* (Verhaeren [1895], cited in Nello, 2001: 17, my translation)

*"The province [northwest Portugal] is the smallest in the land but has been growing the most in terms of population: [...]. It has no more than three cities and twenty-five towns; however, the villages and hamlets are so numerous, that it looks like a continuous city [...]. The town of Guimarães has four parishes, counting five thousand souls, but its territory spreads over ninety-six parishes with thirty thousand people."* (Silveira, 1995 [1789]: 50-51, my translation)

The phenomenon of urbanisation spreading throughout whole geographical territories, giving rise to a coalescence of the meanings of 'city' and 'region' is not new at all. The second half of the 20<sup>th</sup> century saw the emergence of a growing set of literature describing the end of cities as bounded and discernible entities and the generalisation of unbounded, fragmented and dispersed urbanisation processes of territorial scale, shifting the matter of concern of urban studies from the 'city' to the city-region, city-territory, urban region, urban landscape, and a plethora of neologisms trying to define the new entities taking shape (Gottmann, 1961; Friedmann, 1978; Sudjic, 1992; Ascher, 1995; Sieverts, 1997; Soja, 2000; Nello, 2001; Hall and Pain, 2006; Schmid, 2006; Katz and Bradley, 2013; Brenner, 2014). Hall (2009) pinpoints the first reference to the 'city region' as a physical concept in Patrick Geddes' *Cities in Evolution* (1915) – urban centres coming together into larger conurbations. Earlier than that, H. G. Wells' *Anticipations* in the UK, Verhaeren's poetry in Belgium, or Silveira's 18<sup>th</sup> century description of the disperse settlement patterns in Northwest Portugal as a *continuous city*, all highlighted the observation that the presence of urban patterns and ways of life on the territory was becoming more and more dominant. Admittedly, the scale and scope of urbanisation has changed in the last 50 years from a 'pointillist' and diffuse fabric of buildings and localised connections to a heavier system based on large infrastructural axes and functional concentrations. But in many cases, like the ones illustrated by the

quotes above, the seeds of erratic and fragmented urbanisation processes gradually humanising places, creating landmarks and overriding clear urban-rural divisions were in place both in ‘cities’ and ‘non-cities’ at an earlier stage than much urban literature has acknowledged. Such loose and localised processes of *in situ* urbanisation were often countered, and sometimes totally obliterated, by the large-scale expansion of dominant core cities, but how much they could be constrained, and how much their traces have disappeared, is related to the scale and speed of expansion of core cities and their impact on the development of the surrounding urban region. This insight may signal an important difference between the spatial development history of urban regions with or without dominant primate cities and will be further explored in chapter 8.

### *Intensive and extensive urbanisation*

‘Extensive urbanisation’, a term typically used in European research and policy (Font, 2004; Portas et al., 2007, 2012; European Parliament, 2009; Grosjean, 2010) is suggested in opposition to ‘intensive’ urbanisation processes, characterised by notions of physical expansion of core cities into dense built-up agglomerations over a relatively non-problematised void (the ‘empty’ hinterland). This was driven by heavy infrastructure and comprehensive planning, following a somewhat linear chronology of urbanisation, suburbanisation and dis-urbanisation (Berg et al. 1982) and stabilising into a spatially selective and socially differentiated configuration, famously represented by the models of the Chicago School. By contrast, the ‘extensive’ is mostly polycentric, undirected and fragmented (Schmid, 2006), allows simultaneous contrary trends rather than a life-cycle of successive stages, grows by pervasively colonising existing infrastructure (Secchi, 1989), and is often erratically induced by the polarising effect of large functional concentrations rather than any plan-based expansion (Sudjic, 1992).

The term ‘extensive’ also denotes the ubiquitous coverage of the urban as something that *is there*, rather than incrementally ‘extending’ from an assumed centre: a pervasive condition rather than a gradual process. A slightly different sense is contained in the term ‘*extended* urbanisation’ as proposed by Brenner (2013; 2014) and widely used in literature to denote contemporary urbanisation. While Brenner’s notion of ‘planetary

urbanisation' is consistent with the implications of the term 'extensive' – despite its more problematic idea of a global fully urban landscape – his use of 'extended' suggests something made larger, stretching across space; the antonym would be 'reduced' or 'narrowed down'. As such, 'extended' denotes a process in-the-making, small-to-large, evolving in time. By contrast, 'extensive' denotes the ubiquity of urbanisation and will be used henceforth as it provides a more precise description of the reality at hand.

The transition to extensive urbanisation is captured, among others, by Ascher (1995) in his description of the *metapolis* replacing the *metropolis*, and by Soja's *Exopolis*, shifting from metropolitan to regional modes of urbanisation (2000; 2011). This shift is characterised by a convergence of the nature of formerly dissimilar concepts, such as city, suburb and rural (ibid.), and a fast pace of change, with planning tools trying to keep up rather than prepare the ground for urban development (Sieverts, 1997). This is visible in the way these territories both demand and resist joint planning (institutional, infrastructural, etc.): they become part of a large and networked urban landscape, but at smaller scales still reflect local rhythms and lifestyles, especially if they have retained older and functionally self-contained urban fragments. People shift between a localized lifestyle, with short, door-to-door mobility needs and tight social connections with family and neighbours, and a detached way of life based on leaping (by car) across different activity nodes (Muñoz, 2002). Economic and technological changes, such as the lesser importance of proximity for socio-economic interaction and the ubiquitous presence of infrastructure allowing activity everywhere (assuming there is a fair distribution and easy access to that infrastructure, which is often not the case, as shown by Graham and Marvin, 2001), tend to stabilise this condition in present times.

Several studies have looked into extensive urbanisation in Europe, often from the bleak perspective of 'sprawl' and its problems (EEA, 2006) but also through a less spatially selective lens illustrated by the 'Rural-Urban Region' (RUR), a spatial correlate of the 'functional urban region' (ESPON, 2005; 2007) developed by the PLUREL project (Piorr et al., 2011). The RUR acknowledges conventional urban, peri-urban and rural areas as fully urbanised, multi-functional territories and proposes an urban policy agenda that engages with this "*new kind of space*" (ibid.: 19). Urban, peri-urban areas and rural are distinguished according to their morphology, population density and main functions

not their intrinsic nature. Engaging with this territory as a whole is important because the PLUREL project estimates that only 50% of the European population defined as living in cities actually lives in areas defined as 'urban', with the other half equally distributed between the peri-urban and the rural within the RUR (ibid.: 27).

There is little point in establishing an urban vs. non-urban distinction when this population has access to transport, infrastructure and urban amenities and can be equally committed to an 'urban' lifestyle (Scott, 2011); when natural areas have been landscaped, planned or infrastructured and are part of the available consumer amenities; and when agriculture, the 'rural' activity by definition, has 'de-ruralised' (Domingues, 2012a) and is now an industrialised, corporate-organised market activity, supported by professional management and technological innovation, competing in global markets and embedded in quality control, distribution and trading processes whose components lie indifferently in 'urban', 'rural' or even 'virtual' spaces. All of this presents new problems of definition for the city, the urban as a whole, and, when considering the usefulness of policy arenas and research methods, for the boundaries of the 'urban region'<sup>13</sup>.

### **3.1.1 Problems of definition**

As a general and encompassing process, the concept of extensive urbanisation cannot be captured by a single piece of theory – many dimensions of the phenomena exist, as we can see from the immense set of neologisms invented to describe it<sup>14</sup>, and different theorists have looked at specific aspects, from the morphological processes first detected by Geddes to the functional approach refined for Europe by Hall and Hay (1980) and others. Relevant aspects can be social, technological, economic, spatial or political, and tracing the genealogy of all those strands of theory is outside the scope of this study. In fact, if we look for research conceptually grasping all these themes, we will mainly find

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<sup>13</sup> Among the many neologisms that describe the contemporary urban condition, 'urban region' is the simplest and most encompassing, as it is not constrained by the more policy-oriented sense of 'city region' in the UK context or the more particular terms proposed by the interpretation of specific scholars. As such, this is the term to be used henceforth.

<sup>14</sup> Rufi (2003) provides a lexicon of newly created words and concepts to explain contemporary urban forms, covering technological, social, and formal perspectives on extensive urbanisation. Interestingly, such a territory charged with so many classifications and names, is also defined as the nameless and formless realm of 'non-place' (Augé, 1995).

local syntheses, rather than grand theoretical generalisations, and what is lost in translation between them is perhaps one of the fragilities of the theoretical framework supporting the theme: specific observations of extensive urbanisation, each with their particular nomenclature have been put forward by Portas et al. (2007) and Domingues (2008) in Portugal; Nello (2001) and Font (2004) in Spain; Ascher (1995) and Choay (1994) in France; Indovina (1990) and Dematteis (2003) in Italy; Schmid (2006) and Corboz (1994) in Switzerland; Sieverts (1997) in Germany; and Meulder (2008) in Belgium, only to name a few. In English-speaking countries, the term ‘city region’ has been widely used (Ravetz, 2000; Scott, 2001; Hall and Pain, 2006), either addressing spatial-morphological features closer to the continental Europe perspectives above, or defining the space of economic and governance structures. A wide-ranging summary of these contributions can be found in Neuman and Hull (2009).

There are nonetheless some exceptions to this trend for rather self-contained and empirical approaches, with efforts to unify the linguistic and conceptual complexity of the phenomenon into a coherent theorisation for urban research. Soja’s work on Los Angeles (2000; 2011) is relevant, as well as Sudjic’s *100 Mile City* (1992), an early effort to explain the forces driving urbanisation in major cities. An important theoretical endeavour is currently being undertaken by Brenner, in collaboration with Christian and other contributors (Brenner and Schmid, 2011). Their ongoing project on ‘planetary urbanisation’ has recently offered a collection of perspectives on the foundations, experiences, histories and ideologies of the phenomenon, that provide a radical, though not highly debatable (Storper and Scott, 2016), framework for urban theory.

*“Please, draw me a region”<sup>15</sup>*

What many of these descriptions have in common is the fact that the distinguishing features of ‘the city’ have been dissolved and, because of that, its actual delimitation – as something opposed to other types of space – is increasingly difficult. In his view of Switzerland as a fully urbanised territory, Schmid argues that indicators traditionally

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<sup>15</sup> Seymour Morsy, councillor at Val d’Oise department, France, in his contribution to the Metropolisation Community of Competence of the INTA Association (no date provided).

used to distinguish cities, such as size, density and heterogeneity, “*no longer provide fruitful criteria in analysing the urban reality of today*” (Diener et al., 2006: 173) – size (as well as boundary) is indeterminable, density variations occur with little respect for centre-periphery hierarchies and change over time (e.g. through daily commuting), and heterogeneity (in the sense of mixture of functions, social interactions and built forms) is so spread across urban landscapes that it is no longer distinctive for particular places<sup>16</sup>. Soja (2011) adds empirical evidence to this by resorting to changes in population density patterns – while formerly a clear gradient line could be seen between central areas and remote peripheries in most metropolitan areas, now that gradient has mostly flattened and density peaks can be found anywhere in the urban region<sup>17</sup>.

Problems of definition and precision emerge immediately regarding the actual boundaries of such regions and the ways to delimitate them for statistical, analytic or policy purposes. Cheshire and Gornostaeva point out that “*one of the peculiarities of the EU is that each country has its own idea of what a ‘city’ is.*” (2002: 17), an issue partially mitigated by the delimitation efforts of institutions such as ESPON (2005; 2007), the BBSR (2011) or the OECD (2012b). Nello (2001) sums up the main difficulties brought by these efforts: administrative definitions may help to gather official statistical data and understand political dynamics but, as a rule, functional interactions and urban forms transverse administrative boundaries. Spatial approaches based on built-up space obscure functional relations happening between physically disconnected locations. Functional definitions based on commuting or communication flows privilege certain activities (e.g. work-residence relations), overrate their material impact on urban space and populations (the same view is held by Brenner, 2001) and mask the importance of other activities due to lack of data. Lifestyle and social specificities are dissolved by the convergence of

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<sup>16</sup> In fact, the debate about whether the city is a specific object of research in social sciences emerged from this idea of ubiquity of the urban. Saunders (1986) provides an account of what several schools said about the subject and how they tried to find specificity in the urban realm, often to see their constructions disputed, under the general argument that if the urban is everything, then maybe it is nothing distinctive – the object of social science will unfold *in* the city, its constraints emerge *from* the city, but it is not specifically *of* the city.

<sup>17</sup> In line with the refusal of this centre-periphery duality, Vaughan et al. (2009) rhetorically ask “*whether the suburbs exist*”. Their answer is that they do exist but are victims of a simplifying vocabulary that merely opposes them, as something ‘other’, lacking history or form, to fixed representations of the city.



general ways of life with ‘urban’ ways of life and do not provide precise limits. Finally, assessing the presence of urban functions depends on the chosen functional sectors and their respective accessibility tends to cover the greater part of the territory.

This study accepts the limitations of the different definitions and will resort to them either for conceptual reasons related to the motivations of the research or practical reasons related to the availability of data. The approach based on urban functions will be used, but with added care to use a sufficiently broad functional spectrum; the administrative definition will be used when it is necessary to comply with the scope of datasets. But a stable definition of the urban region across all chapters is not the purpose here: each boundary leaves a different footprint, suggesting an urban region working in ‘variable geometry’ according to needs at a given moment, whose definition is always temporary (MacLeod and Jones, 2007). As such, the study accepts the argument that bounding an urban region can only be usefully done in reference to its “*specific patterns of flows or specific institutional structures.*” (Nelles, 2013: 1352). How the boundaries change and what triggers that change is in itself a relevant research problem.

### **3.2 The distinctive features of extensive urbanisation**

Among the many dimensions of the phenomenon explored by earlier research, four distinctive features of extensive urbanisation are relevant for this discussion, as they inspire the focus of the empirical chapters ahead. These are the ubiquity of centrality as an effect of functional decentralisation, whose relevance for the emergence of ‘extensive cities’ in second-tier urban regions is addressed in chapter 6; the increasing isotropy of the territory and its hidden imbalances, illustrated by an analysis of socio-economic patterns in chapter 7; the increasing dispersion of population and built space, whose historical trajectory in second-tier urban regions will be analysed in chapter 8; and the unresolved issues of metropolitan governance, discussed in chapter 9.

#### **3.2.1 Ubiquity of centrality**

*“Without any warning, a flash of energy short-circuits the field, and precipitates a shopping centre, [...]. Just as the dust has settled, there is another discharge of*

*energy, and an office park erupts out of nothing [...] The two have no visible connection, yet they are part of the same city [...]"* (Sudjic, 1992: 305)

What Sudjic is stressing above, besides the fact that full urbanisation is not the same as homogeneous urbanisation, is that the notion of 'centrality' lost its hierarchical nature and is no longer restricted to core cities. It has become common for large urban areas to diversify their centralities and build new functional nodes in expansion areas disconnected from traditional centres. Often, such nodes are competitive; sometimes they can complement each other. There is a fundamental change in the concept of centrality, as urbanisation becomes undirected and eccentric rather than concentric and hierarchic (and simultaneous on several fronts rather than incremental, one could add): "*centrality is becoming general, omnipresent and yet ephemeral*" (Schmid, 2006: 164). It is not that cities lack a definite 'historical' centre; it is rather that partial and incomplete 'centralities' will regularly emerge with little concern for existing centres and their hierarchies. This was argued by authors signalling the growing inaccuracy of central place theory – functionally polycentric but hierarchically structured – to explain the distribution of urban functions and the shift to network theory – functionally polycentric but networked and complementary (Meijers et al., 2014). This shift may be more pronounced in regions lacking the functional and institutional dominance of large core cities: the empirical chapters will explore this as a feature of second-tier urban regions, starting with the functional analysis in chapter 6.

Domingues (2012b) argues that the concept of centrality lost meaning through the transition from a compact city to an extensive urbanisation paradigm. He writes that the classical notion of 'centrality' depended on capturing and maximising three qualities: agglomeration of top-level functions, enhanced accessibility, and production of collective references and identity. The defining issue, he contends, is that while in the former paradigm all three qualities tended to converge in the same geographical location – the 'city centre' – now they can occur in very different places and in different combinations. Added functional activity can relocate to recent edge-city settlement (Garreau, 1991), utmost accessibility can emerge within a set of motorway exits, and the production of image and identity references typical of compact urban centres is certainly challenged by

the largest shopping centres of the urban region. Any definition of centrality will necessarily have to refer to a particular combination and will be always incomplete.

Structuring this divergence is difficult: in his own *anticipations* of the future city region, Hall (2009) suggests guiding growth along public transport links, in the form of “*clustered urban developments, at intervals, around train stations and key motorway interchanges offering exceptionally good accessibility*” (2009: 814). Despite the reference to motorways, this rightly privileges the logic of public transport – points of access and interchange focusing development. But what can be said about the door-to-door logic of the private car? Large-scale accessibility does not necessarily support all types of urban functions. It can be decisive to locate office parks, shopping centres or large public services, but smaller scales of mobility, dominated by private transport, coexist and may also provide access to important ‘centralities’ – the changing trends of urban cultural hotspots or nightlife locations immediately come to mind.

This suggests a reflection about how the different scales and temporalities of the ‘urban’: to quickly move by car or train from transport node to transport node is not the same as driving children to school or using the city tram for a one-stop trip. Motorways and their interchanges, like trains and their stations, trigger spatial relations based on duration of the journey. The urban forms colonising these “*beads-on-a-string*” structures (Hall, 2009: 814) base their location on accessibility, even functions typically associated to the identity of urban centres: as a kind of outpost of civilisation, the public library of Valongo, in the Porto urban region, was built outside the town proper, near a motorway intersection, surrounded by nothing but a ‘big-box’ supermarket, in an area ironically called ‘New Centrality’. The regional hospital, some 40 km to the east along the same motorway, opened in 2001 under location criteria very similar to a shopping centre.

The problem is that large scale mobility infrastructures, framing the emergence of such large scale urban functions, often coexist alongside tighter meshes of mobility, normally inherited from the past, which have not lost their ability to serve the smaller scale needs of the local population. Complex patterns emerge when people undertake activities at multiple places, indiscriminately switching between transport modes and scales, and the integrated planning of public transport collides head-on with dissimilar but spatially overlapping mobility needs and flows. Attempts to structure such systems

include extending the urban tramway, originally conceived for dense urban cores, to the urban region scale, inserting a finer, more 'urban' device into a much larger territorial context. Hall (2013a) mentions examples in Germany and France. Reviews of the impact of this form of urban transit reveal variable but often positive effects in attracting businesses and improving cityscapes and mobility (Chen, 2014). This notion of extending devices, qualities and demands once associated with the 'city' to the larger scale of the 'urban' is a key illustration of the process of metropolisation as defined below, and may be particularly applicable to second-tier urban regions. But that extension does not imply that urban regions are equally 'urban' in all places and along all their dimensions, as the next section will show.

### **3.2.2 Emerging imbalances within increasing territorial isotropy**

The title above stresses the doubt whether 'increasing territorial isotropy' is actually the case, the fundamental problem being that functional and morphological isotropy may obscure strong socio-economic asymmetries. Isotropy is a mathematical concept meaning uniformity in all directions, which seems to be illustrated by built-up spaces spreading in all directions and the convergence of population densities (Soja, 2011). Demographic and morphological dispersion is in part related to a more decentralised distribution of functions, infrastructures and services, although this changes from place to place: in an attempt to find out what affects functional distribution, Cardoso and Meijers (2013) compare the spread of top-level urban functions across the urban regions of Porto and Lisbon, in Portugal<sup>18</sup>. The more morphologically isotropic settlement patterns of the former do coincide with a more balanced distribution of important functions, less dependent on core city proximity, stressing the greater tendency of capital cities for functional dominance, against the more horizontal relations in second tier urban regions. In any case, while the general allocation of basic services will locally serve the

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<sup>18</sup> Cardoso and Meijers (2013) refers to a conference paper discussing initial findings of this thesis, with additional analysis in collaboration with E. Meijers (OTB - TU Delft), presented by R. Cardoso at the 9<sup>th</sup> European Urban and Regional Studies Conference at the University of Sussex, Brighton, 10-12 July 2013.

population, especially if they are public, comprehensively-planned services<sup>19</sup>, more specialised functions follow other, less ‘isotropic’ location logics (Burger et al., 2011). This is notably the case of cultural amenities in Europe, which

*“still follow[s] a Christallerian logic, signified by the concentration of these consumer services within the largest place in a FUA [functional urban region] as a result of the higher level of local demand and the accessibility of these often central places to clients from neighbouring places.”* (Burger et al., 2015: 1104)

Domingues (2008) argues that infrastructure provides the main support for territorial isotropy: as long as it ‘irrigates’ the territory with material and immaterial networks, urban activity can take place virtually everywhere and congregate in any form between the extremes of hyper-density or hyper-dispersion – his studies on urbanisation in northwest Portugal provide sufficient local evidence for this<sup>20</sup>. But for Domingues this merely reveals a potential, not an actual match between existing conditions and effectively developed capacities: a territory-in-waiting, “*permanently emerging*”, writes Meulder (2008: 29) about Flanders<sup>21</sup>.

Therefore, increasing isotropy is only part of the story: in their POLYNET study (2006), Hall and Pain note how “*a balanced spatial distribution of development does not guarantee an even distribution of complementary functions or a more sustainable form of development.*” (2006: 208). In his analysis of Catalonia, Nello quotes Indovina to argue that “*it is in no way indifferent to analyse what is dispersed and what is concentrated*”

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<sup>19</sup> Hague (2006) calls the attention to this point in his criticism of the superficial characterisation of intra-urban differences in early ESPON studies and argues that ‘isotropy’ can no longer be assumed when this kind of planning is replaced by ad hoc private provision of urban functions.

<sup>20</sup> With Nuno Portas and others, Álvaro Domingues has studied urbanisation patterns in Northwest Portugal for more than two decades. His views on extensive urbanisation are strongly connected to other Southern European syntheses. See for example Font et al. (2004), a comparative study of urbanisation processes in Portugal, Spain, France and Italy.

<sup>21</sup> Actually the descriptions by Meulder of the urbanisation patterns in Flanders are very similar to Domingues’ evidence about Northwest Portugal (disperse settlement, dense infrastructure, incoherent planning, non-hierarchic overlap of urban functions). They are also explained by the same historical-geographical factors (fertile soil giving rise to very early occupation, a tight network of small towns and villages with similar municipal powers regardless of size, weak regulatory frameworks and a very small-scale division of cadastral property).

(2001: 35). First, services, uses and activities do spread across larger territories but the freedom of choice to move among them and pursue employment or residential preferences is not shared by everyone in the same way: access to mobility, income and age are decisive factors largely independent of the region's spatial structure. Notably, King (2004) argues that while the polycentric model seems appealing due to its apparent freedom of choice for citizens, it will only be successful if fair opportunities for mobility are provided and individual reasons for loyalty to place, even if 'inefficient', are protected. Second, functional diffusion does not affect every economic sector in the same way. The emergence of functionally specialised areas can create locally disconnected 'islands' and greater fragmentation: it is important to analyse who and what supports those functions, for whom they produce their activity, and at what scale they influence the remaining territory. These embedded imbalances restrict the potential isomorphism between different layers of territorial analysis, which can be illustrated by very different aggregations of socio-economic groups of population, often as enclosed and homogenous patches, in morphologically similar urban regions. This is another feature of the distinction between primate and second-tier cities which will be explored in chapter 7.

### **3.2.3 Dispersion of population and built-up space**

The flattening of density gradients in urban regions (Soja, 2011) suggests that population is increasingly dispersed throughout larger areas, leading to lower general densities and a tendency for greater mobility<sup>22</sup>. Lower densities are mainly due to a faster growth of built-up space than population. Kasanko et al. (2006) analyse 15 European urban areas to show that considerable growth has occurred in all of them, mainly in the form of discontinuous developments. The structure of European cities has indeed become less

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<sup>22</sup> Disperse urbanisation can increase mobility due to the several daily needs of people (shopping, entertainment, travelling to work, school, etc.) but it is also true that urban containment – namely in mono-functional residential developments – may also increase commuting, as people will “*live farther away from their jobs as they would otherwise do.*” (Hall and Pain, 2006: 209).

compact, as confirmed by the ‘sprawl index’ of the OECD database (2012b), a ratio between the growth of population and built-up space in different cities<sup>23</sup>.

Many authors have qualitatively devalued these new urban spaces as something lesser than ‘the city’, which relates to a similar devaluation of the role of places outside core cities in the historical process of urban development (Vaughan et al., 2009; Grosjean, 2010). Chapter 8 will address this issue and argue that, in fact, these places played an important and early part in the emergence of second-tier urban regions, and were not merely empty spaces awaiting urban expansion. Phelps notes how “*post-suburban development has been defined in relation to something considered the city proper – whether broadly ‘good’ or ‘bad’ – since at least medieval times*” (Phelps et al., 2006: 9). In fact, as the distinction between city and periphery dissolves, “*new settlements emerge, ecologically impracticable, functionally unmanageable and socially conflictive*” (Nello, 2001: 39): the assumption is that we have “*urbanisation but not city*” (ibid.: 13).

These visions have made the option to contain dispersion very popular amongst policy-makers, either through physical barriers, such as green belts, or strict regulation of urban expansion. But a first perplexity emerges immediately, linked to the kind of organism the ‘unbounded urban’ produces: the scale of dispersion one wishes to contain is territorial and cross-boundary but the scale of regulation is usually constrained by administrative delimitations. Considering the way urban dispersion advances by colonising discontinuous fragments of available space, ‘like water through a sponge’ (Secchi, 1989), there is no guarantee that neighbouring authorities agree on what and where to contain or that the sum of their decisions will produce a coherent plan.

A more fundamental barrier to the interpretation and management of this phenomenon is that the historical process of dispersion of population and built-up space did not occur in the same way in every urban region. Hall and Pain define the ‘mega-city region’ as the outcome of the diffusion and relocation of core city activity, “*a long process of very extended decentralisation from big central cities to adjacent smaller ones, old and*

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<sup>23</sup> Note that this accounts only for the change between 2000 and 2006 (see OECD, 2012b for the explanation of indicators) and not for the departure conditions. Here, Kasanko et al. (2006) provide a longer-term view (mid-1950s to late 1990s) of the dispersion process in cities.

*new*” (2006: 3). But such a centrifugal expansion process from a monocentric city into a polycentric configuration is by no means the only possible route to an urban region.

In an effort to provide a more nuanced model, Champion (2001) proposes a three-tier typology of *centrifugal*, *incorporation* and *fusion* modes for the emergence of polycentric urban regions. The centrifugal and fusion modes roughly express the accepted distinction between the expansion of large primate cities onto comparatively ‘empty’ surroundings, arguably the case of large capitals like Paris or Madrid (Lambregts, 2006), and the merger of equivalent and separate centres into a single urban continuum, typically illustrated by the Randstad or RhineRuhr (ibid.). The incorporation mode, on the other hand, is a mixed trajectory of core city expansion blending with the merger and densification of pre-existing smaller urban centres and fragments spread across the region; the resulting form of polycentricity is less spatially balanced than the fusion mode but less hierarchic than the centrifugal mode. Disregarding the problems of this simplified model (urban regions will exhibit different tendencies across their history) it provides a clear framework for differentiation and reminds us that “*pre-existing forms of settlement can influence subsequent patterns of development.*” (Champion, 2001: 665); the distinction helps us understand “*why in some regions the concept of polycentric development is welcomed [...] while in other regions polycentricity is rather seen as a barrier [...]*” (Lambregts, op.cit.: 117). These are central observations for the argument of this thesis and chapters 6 to 9 will further explore their meaning and ramifications, namely by placing second-tier urban regions as a typical case of the incorporation mode.

Naturally, as they become larger and more dispersed, urban regions will tend to some kind of polycentric structure. However, the lack of correspondence between their different dimensions and the difficulties in their definition creates additional difficulties for the next feature of this analysis, namely the governance of extensive urbanisation.

### **3.2.4 Governing unbounded and poorly defined urban regions**

The features of extensive urbanisation discussed above have an impact on the governance conditions of urban regions. This is now a classic theme of urban research and the last three decades have witnessed several experiments in setting up institutional structures



that respond to the spatial and functional changes happening on the ground (Lefèvre, 1998; Neuman and Hull, 2009; Borraz and Le Gales, 2010). The apparent weakening of centralised planning and decision-making by the traditional institutions of the national state and the emergence of networked structures mixing public and private entities with variable shapes had important impacts at the urban and regional scales. In the United States, Katz and Bradley (2013) have announced a ‘metropolitan revolution’, with metro areas and their leaders taking a hands-on approach to solve the economic and policy problems that the central state cannot, or will not, address. In a less celebratory tone, Brenner (2004) writes that the rescaling of national state power did turn urban regions into important institutional actors, but national institutions still play a relevant role of coordination and implementation; there is a reconfiguration but not demise, and this changes from country to country. The argument of this thesis echoes this duality, as it advances the importance of integrated second-tier urban regions and their agency, but recognises how the urgency, possibility and successful outcome of that integration depends on fundamental differences in the position of second-tier urban regions within different national urban and political systems.

The question of how urban regions are ideally governed is an ongoing debate and the answer will vary according to context and time. But it must be considered that the whole notion of how to conceptualise an urban region for governance purposes is changing in light of the understanding of extensive urbanisation proposed here. The recent thinking about the unbounded character of the urban and the ‘city’ as only one of its forms of organisation (albeit a successful one) has led to arguments for a departure from a spatially selective, city-centric configuration that relies on the power of a core urban area over the surrounding region and does not represent the interests of the whole population, towards a more inclusive approach that includes the interstitial and peripheral spaces part of the urbanised area and gives greater weight to their concerns (Harrison and Heley, 2015; see also the PLUREL project findings above). However, the tools allowing urban regional constructs to achieve this have not been defined yet.

It seems clear in any case that a top-down institutional approach set up by national governments or by a single dominant core city has been slowly replaced by more collaborative and horizontal arrangements between all parts of the urban region

(Lefevre, 1998) for the sake of added political legitimacy and greater recognition by local actors of the virtues of large scale governance structures. This can happen even without a dedicated political framework at that scale, which is broadly the approach of ‘new regionalism’, arguing that coordination does not “*require institutional consolidation, but can be achieved through the creation of voluntary networks that include a variety of interdependent actors.*” (Nelles, 2013: 1353). The effectiveness of these networks depends on addressing institutional asymmetry, which “*may have positive or negative effects on cooperation depending on coercion versus potential for joint gains*” (ibid.: 1358).

Yet, there are difficulties in fine-tuning institutional frameworks and spatial-functional constructs, even disregarding the need for consolidation. An initial problem is the little recognition by institutions and the population of such voluntary networks as ‘makers’ of urban regions. Healey (2009) argues that urban regions are ‘imagined arenas’, summoned up by particular actors at particular times for particular purposes, and do not settle into the imagination of residents as a recognisable shared space in the same way that old municipal power does. As such, urban regions as political projects are one-way processes put forward by policy-makers but fall short of creating a recognisable identity. The example of the Randstad has been used as a concept that never left the discourse of policy-makers and academics to enter the imagination of residents: “*there does not seem to be a common, positive identity linking the people living in the Randstad [...] Instead, identity is more closely linked to the city in which people live.*” (OECD, 2007: 38). Lambregts (2006) acknowledges this when discussing “*how to make a metropolis of a region that refuses to become one.*” (2006: 115) and confronts it with the higher levels of interaction and sense of ‘belonging’ in urban regions formed around a single core city.

This is significant for this study. As discussed earlier in the introduction, existing research suggests that creating an identity and shaping a governance project for the urban region may be made difficult by the lack of a leading city (Dieleman and Faludi, 1998; Nissen, 2008), as the Randstad example illustrates, but also by the excessive dominance of a core city casting its shadow over the urban region (Lefèvre, 1998; Feiock, 2007). Interestingly, some successful forms of metropolitan governance based on a mixed model where the core city acts as ‘first among equals’ have been tried in European second-tier urban regions, namely in France (Nicholls, 2005), Italy (Balducci et al., 2011;

Lefèvre, 1998) and the United Kingdom (Harding et al., 2010). The apparent progress of metropolitan governance and agency in these regions may be a positive outcome of the lesser attention they receive from national state structures, when compared to “*the reluctance of highly centralised states to 'let go' when it comes to shaping the future of national capitals.*” (Harding, 2015). This discussion will be resumed in chapter 9 with the argument that, somewhere between dominant core city and polycentric network models – i.e. having a *leading* but not a *dominant* city – second-tier urban regions may be in a privileged position to engage in large scale governance projects.

### 3.3 The perspective of metropolisation

*“The city is the region. Urban development requires the shaping of an urban region.”* (Eisinger, 2009: 32)

Among the different features that characterise the paradigm of extensive urbanisation, the four above are particularly important for this study, as the aspects that may best illustrate the specificity of second-tier urban regions can be seen as especially clear manifestations of these features. But they also define the underlying territorial conditions under which the processes of integration of urban regions occur. This section will present the concept of metropolisation and argue that it provides the more appropriate interpretative lens to understand integration processes in territories characterised by forms of extensive urbanisation.

#### 3.3.1 Integration: exploring size, diversity and cooperation

As discussed earlier, there are some substantiated arguments about the alleged benefits of integration processes in urban regions, namely as a proxy for economic growth relying on agglomeration economies. Their common feature is that for a given urban region there are advantages in greater size, higher functional mass and diversity and lower institutional fragmentation, more so when these factors are considered within a single urban system. This section avoids repeating the arguments already advanced in the

introduction about this topic. However, it is useful to summarise at this point the core ideas, before developing the concept of metropolisation as a particular interpretative lens to understand integration under the extensive urbanisation paradigm.

The ESPON 1.1.1 project (2005) has defined Potential Integration Areas (PIA) around European functional urban regions<sup>24</sup> and argued the potential advantages for many cities of developing integration policies at this scale, in terms of population growth, incremented labour market and rank in the national and European urban systems. The Dutch EMI - European Metropolitan network Institute argues a similar case (Meijers et al., 2012), following evidence showing that a set of separate centres in a polycentric region does not achieve the same functional performance as a monocentric city of equivalent size (Meijers, 2008). Through this ‘upward spiral of metropolisation’, as EMI calls it, cities in dense urban regions “*reap the benefits of agglomeration by jointly borrowing size from each other [...] metropolisation is a highly urgent and beneficial strategy.*” (Meijers et al., 2012: 12). The arguments are again a larger and more diverse labour pool, more and higher-level urban functions and infrastructures, and greater attraction of knowledge-generating institutions. Other research also stresses the role of size, functions and institutional integration as drivers of productivity and growth: larger cities are not only more productive overall, but also individual productivity (Ahrend et al., 2015)<sup>25</sup> and the speed of career progression (Champion et al., 2014) tends to increase with city size. Integrated governance is another positive determinant, and “*cities with fragmented governance structures have lower levels of productivity.*” (Ahrend et al.: 6). Functional diversity works as a productivity premium, with “*advantages associated with diversified cities which exhibit many different sectors and activities, rather than specialised cities which exhibit a smaller number of specific sectors and activities.*” (McCann, 2015: 22). Glaeser et al. (2001) and Markusen and Schrock (2009) add that cities better served by consumer-oriented amenities tend to be more attractive for people

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<sup>24</sup> See ESPON (2005) for the methodology of definition of PIAs, based on areas of accessibility. The report also warns that if these policies were to be developed in the leading urban areas of generally less urbanised countries outside the European ‘pentagon’, “*a further contrast between these areas and the rest of the peripheries*” (ESPON, 2005: 163) could be created.

<sup>25</sup> City productivity is measured by micro-data on wages, capturing wage-premiums for individual cities. The paper defines ‘city’ as the Functional Urban Area. See Ahrend et al., 2015 for other technical definitions, including differences in data availability for individual countries.

and firms and trigger population growth. Moreover, developing more and higher-level functions is necessary “*for fully exploiting agglomeration economies and ways to overcome urban decreasing returns.*” (Camagni et al., 2015: 1069).

Several questions emerge, namely about what is meant by ‘benefits’ of integration in urban regions. The perspective of economic growth through an increase in scale and agglomeration benefits must be confronted with the question of how well social, environmental and other issues are resolved by further integration. The apparent logic of responding to processes of extensive urbanisation which are happening on the ground anyway should not underplay structural problems coming from larger frameworks, be it unemployment, industrial decline or EU and national economic policies. Moreover, cities and urban regions are not homogeneous actors and within the broad range of intervening forces – public sector managers, business elites, daily users of the urban system, etc. – there are those who presumably would gain and others who would lose. Benefits do not apply to all actors equally. Furthermore, from an institutional point of view, successful forms of integration can either happen through actual institutional consolidation, as McCann and the OECD propose, ‘advantageous fragmentation’ based on competitive diversity and public choice (Hoyler et al., 2006) or inter-municipal partnerships, built and rebuilt according to specific projects and needs (Nelles, 2013). Therefore, a limit must be set for what integration strategies can provide, as they do not operate in an ideal scenario and different constraints take place in each specific context.

### **3.3.2 Metropolisation as a specific interpretation of integration processes**

This research project adopts an understanding of the urban phenomenon which departs from judgemental distinctions between ‘proper’ cities and other, ‘lesser’ spaces, following the arguments by Sieverts (1997), Domingues (2008), Scott (2011), Brenner (2014) or Harrison and Heley (2015). These arguments have received less attention than the qualitatively opposed, usually bleak views on sprawl and dispersion, which rely on an embedded core-periphery mentality of cities vs. non-cities and stability vs. change. On the contrary, metropolisation – or *metropolitanis[z]ation*, especially in North American literature (the terms have been used interchangeably) – is understood here as (1) a

territorial process through which spatially, functionally and institutionally fragmented urbanised regions integrate and emerge as coherent urban systems able to reap the benefits of scale; (2) a conceptual transformation through which the qualities and features formerly attributed to the space of city are reconstructed at the scale of the integrated urban region; and (3) a planning strategy aimed at achieving such integration (Nello, 2001; Indovina, 2004; Nissen, 2008; ETH Basel, 2010; Meijers et al., 2012). This section will introduce the concept of metropolisation as a lens to interpret the integration of urban regions in the context of extensive urbanisation.

Urban regions undergoing integration processes, so the literature argues, tend to knit together and function as a larger polycentric whole, rather than maintain allegedly unproductive relations based on core-periphery imbalances, on one hand, or fragmented and competing autonomies, on the other. Metropolisation basically explores how this happens under the conditions of extensive urbanisation, common to a large proportion of the contemporary world. The key conceptual transition of this approach is one of large urban territories ‘consolidating’ into extensive cities, rather than cities ‘dissolving’ into formless urban landscapes. As such, it implies an acceptance of the full scale of the urban as the arena in which the contemporary city is reconstructed, as well as a qualitative leap from earlier views of urban regions as bounded cities embedded in ‘sprawl’ and other forms of fragmented and dispersed interstices. It clearly echoes the arguments by Domingues (2008) and Brenner (2014) about the ubiquity of the urban and the city as only one of its forms of organisation, as well as the case made by Scott (2011) and Harrison and Heley (2015) about how a city-centric vision harms the full consideration of other configurations within the urban region, where a major share of population and economic activity are located. The general outlook of such a place would be, ideally, an institutionally and spatially consistent entity with ‘city-like’ qualities at the territorial scale, rather than one or several cities loosely linked by fragmentary and under-equipped urban expansion. Such an ‘extensive city’ would therefore reap the benefits of scale (Meijers et al., 2012) and benefit economically, socially and politically from this large-scale consolidation. A clear description applied to a once archetypal ‘European city’ comes from research about Metropolitan Zurich by ETH Basel:

*“The economic core of Zurich was historically concentrated in a small area around Bahnhofstrasse. [...] these sectors suffered a great expansion leading to an ‘explosion of the centre’: city functions were spread throughout a broad region. Thus a new urban configuration emerged, characterised by the regionalisation of economy and society. The city acquires a regional scale and the region becomes a consistent unit of daily life. [...] In a general sense, this process can be understood as metropolisation.”* (ETH Basel, 2010: 30)

For the purposes of applying this concept to our object of study, some attention must be given to the potentially confusing meanings of the term ‘metropolisation’, as it has been used differently in specific contexts. Being a vague term which can be easily appropriated, earlier literature has given it at least four meanings. They are not properly different from each other – they rather successively expand the definition of the concept. The next step, then, is to trace a short genealogy of metropolisation.

#### *The genealogy of metropolisation*

Metropolisation is the anglicised form of the French term ‘*métropolisation*’ and its first and simpler definition comes from French research: the process of concentration of functions, activities and population in the largest metropolitan areas (Elissade, 2004). Roger (2007) adds that the definition emerged in France in the 1990s as a result of the strong demographic growth trends in the largest cities detected by the 1990 census. Such metropolitan areas will further detach their economy and demography from the remaining territory and some will enter into closer relations with other large urban centres worldwide, rather than with their own hinterland, linking the concept directly to the command and control narratives of global city hierarchies (Sassen, 1991).

A second and more restrictive definition comes from economic geography. Kräkte applies the term as “*a paraphrase for the increasing concentration of economic development potentials of the research-intensive industries and knowledge-intensive services on metropolitan regions and urban agglomerations*” (Kräkte, 2007: 5). Here the

focus is on a single economic sector, but the concept remains descriptive of the primacy of a few large urban entities, pulling away from the remaining territory.

The ESPON POLYCE report - Metropolisation and Polycentric Development in Central Europe (2012) uses the term for a form of urban restructuring “*establishing polycentric relations [...] and the establishment of new economic functions in most attractive metropolises, which become the new economic centres of growth*” (ESPON, 2012b: 7). This third definition introduces polycentrism and intra-regional convergence as features of metropolisation – population and jobs grow “*not only in the core city, but also on the regional level within the metropolitan agglomeration and the region*” (ibid.).

The fourth meaning of metropolisation used here expands all of the above: it recognises the increasing concentration of people and activities in metropolitan regions but does not focus on contrasting such regions with the rest of the territory; and it embraces polycentrism as a condition for the process to occur but does not rely only on functional aspects and economic outcomes. Metropolisation here mainly focuses on integration and adds a conceptual and a strategic dimension to the territorial process described by previous uses of the term. Besides considering how much an urban region becomes a single urban system and a territory for daily life and activity, it also asks how it acquires city-like qualities overall and what strategies work towards that goal.

### **3.3.3 From the ‘regionalisation of the city’ to the ‘citification of the region’**

“*Great art... can come about only in a very special kind of city.*” (Hall, 1998: 158)

However...

“*I find this immensely refreshing, [...] you can cause a theatre to flourish not only right at the heart of a great city, but also in lots of other interstices all over the place, which to me is terribly encouraging.*” (Hall and Hall, 2006: 384)

From a theoretical point of view, the most promising aspect of this way to look at the integration of urban regions is the notion of ‘qualitative leap’ that it entails when compared with notions of dispersion, sprawl, suburbanisation or others. Paraphrasing



Nello, metropolisation happens when ‘urbanisation gives way to the city’. Indovina (1990; 2014) points out that the attention given to urban dispersion has obscured the parallel phenomenon of metropolisation, which means the consolidation of extensive urbanisation into a consistent urban entity. A process of metropolisation adds urbanity to dispersion and reconstructs the qualities of the city at the urban region scale. From the observation of the daily workings of large and dispersed urban regions in Northern Italy, he argues that both phenomena do not belong to different stages but are related:

*“Dispersion generates the metropolisation of territory which, in turn, prevents that dispersion damages individual and social life; under certain conditions it can even provide economic growth and social development.”* (Indovina, 2014: 109)

In essence, Indovina suggests that if the sites of economic transactions, cultural encounters and social relations are preserved, whatever the scale of interaction, then the city still exists: from this perspective, extensive urbanisation is neither the dissolution of the city, nor the end of the city, but rather a new way to produce it with all its qualities intact. In other words, more than interpreting cities as ‘dissolving’ into formless urban landscapes - the ‘regionalisation of the city’ - metropolisation implies a process of *citification of the region*: by aggregating functions, people and activities, ensuring connectivity, expanding the scope of planning and implementing some form of integrated governance in the fragmented territories of extensive urbanisation, a larger, more equipped and more diverse city that was not previously *there* as an recognisable entity may emerge at the urban region scale. This is captured by the logic of the PLURIEL project, discussed in section 3.1, as well as by the notion of ‘city of cities’ used by Nello (2001) to describe the urbanisation of Catalonia and Balducci et al. (2011) in the strategic plan for Milan: the demands and expectations usually reserved for ‘proper’ cities are applied to the territories of extensive urbanisation. The concept is similar to the observations of the Ruhr area by Sieverts (1997) and his notion of the *Zwischenstadt*, the unnamed and disregarded urbanised spaces in-between cities, which need to be transformed “*realms people care about*” (1997: x). The fact that such an argument, expanding the qualities of the city to the territorial scale, has been translated to English

as ‘cities *without* cities’, is revelatory of the difficulties in acknowledging the concept exempt from embedded core-periphery ideologies (Massey, 2005).

As an interpretative lens used to understand the increasing integration of urban regions, metropolisation belongs to a larger plethora of conceptions that researchers have built throughout the years, which vary according to the components that are highlighted and the way their relations are analysed. Neuman and Hull (2009) produced the following table to simplify the existing theoretical interpretations:

Framework	Spatial flows	Typical example
Linkages	Connections between points	Freight flow analysis
Gradient	Fluctuation of a phenomenon	Air and water pollution
Bounded	Contiguous extent	Political jurisdictions

**Table 3.1** – Three spatial understandings of urban regions (source: adapted from Neuman and Hull, 2009: 780, based on categories defined by Dewar and Epstein, 2007).

Many conceptions belong to the ‘linkages’ framework: studies like Hall and Pain’s *Polycentric Metropolis* (2006) are examples of models focusing on flows between points to define the structure of an urban region. Research dedicated to define the syntax of morphological continuities or the limits of administrative jurisdictions sits within the ‘bounded’ framework. But the concept of metropolisation implies a different conception, which acknowledges the ubiquity of the urban as an generalised phenomenon and considers the different forms that urbanisation can take, each with their own qualities; in other words, formerly opposed concepts, such as ‘city’, ‘suburb’ or ‘rural’ are seen as ‘fluctuations of a phenomenon’ or gradients of an underlying condition. In that sense, it belongs to the ‘gradient’ framework of understanding.

### 3.3.4 Life in *any point* of the territory: metropolisation as a strategy

Vague as it may seem (difficulties in translating concepts from Italian, Spanish or French original theory into Anglo-American frameworks also play a role here), very concrete measures can be extracted from the interpretation of metropolisation. In fact, planning for the ‘extensive city’ has been an important concern of some scholars and policy-makers as a way to address the problems brought by the main features of extensive urbanisation described above – organising dispersion, balancing functional distribution, connecting and giving meaning to centralities, and planning infrastructure both for large-scale, high-speed as well as for small-scale, low-speed mobility.

Considering the territorial coverage and national coherence, the French SCOT (Territorial Coherence Schemes) with 407 plans ongoing, approved or under development, is one of the most developed forms of planning for metropolisation. SCOT is a long-term strategic planning tool for urban regions accounting for all that relates to that territorial scope: infrastructure (and its relation to local scales), natural spaces and bio-physical units (and their relation to local pressures from the construction or tourism industries), housing targets, employment nodes, and provision of collective metropolitan services. Despite some contradictions, such as the simultaneous acknowledgement of the diffuse urban region as the right scale for spatial planning and the desire to plan for a ‘compact city’ (leading to a lack of actual capacity to achieve that goal – see Desjardins, 2007), SCOTs aim to prevent ineffective competition and redundancies among interdependent urban areas, and have the power to define cross-boundary planning areas and objectives, which do not depend on political changes in individual municipalities.

The lack of such spatial ‘fine-tuning’ with the changing scales of urbanisation can result in uncoordinated policies lacking spatial context, as noted by Hall and Pain for the cases of Greater Dublin and Northern Switzerland (2006: 204-206). They point out the lack of policy instruments covering the urban region and argue the need to “*think both strategically and locally*” (ibid.: 210) across geographical scales. This was the option of Balducci and colleagues in their *Strategic Plan for Milan* (2004-2007). ‘City of Cities’ was the motto adopted by the plan and the whole urban region was considered as the ‘city’ for intervention, focusing on cooperation and on the liveability of people and businesses at *any point* of the territory rather than a selection of predefined centres. The strategy

also gave up the assumption of planning as a set of successive initiatives for a unitary actor and addressed the weak institutional support and territorial imprecision of urban regions: “[...] *the consideration of the plurality of actors as a constitutive character of the process.*” (2010: 47). While the first results of the plan are encouraging, Balducci writes that the provincial authorities have not yet embraced the concept and are still “*attracted by the hard mainstream infrastructure-and-big-projects approach*” (ibid.: 61).

Similarly, when writing about the *Zwischenstadt* (1997), Sieverts was not merely observing the progression of low-density urbanisation in the Ruhr, but mainly proposing what can be done to improve and qualify it. He called for a greater centrality of those areas in planning priorities, from preserving and highlighting the specific character of each part of the *Zwischenstadt* as potentially attractive to live and work, to developing public transportation networks of regional scale to serve those areas. The outcome would be a departure from embedded core-periphery ideologies and a stronger integration of the urban system as a larger and better connected entity, with greater diversity of identities – a step into metropolisation. A related argument is made by Lambregts at the 2012 Deltametropolis debate about the *Metropolitan Strategy for the Netherlands*:

“[...] *it struck me that the factors that contribute to metropolitan development have been the same for the past 30 years. Interconnectivity, identity and creating mass [...] I am tempted to say that regardless of the trends, I have not yet come across any scenario or trend that detracts from these three factors.*” (2012: 23)

Regarding infrastructural linkages, Hall (2013a) also mentions the trend of turning formerly ‘city’ networks, such as light rail, into large ‘urban’ networks, denoting the extension of the notion of ‘city’ to a larger, territorial scale. The light rail system in Porto (*Metro do Porto*) was designed as a divergent network linking places far apart in the urban region (using older suburban rail tracks), rather than converging into the core city. Its streamlined *Eurotram* trains, first used in compact, historic cities like Strasbourg, go through the dense historic centre as well as the diffuse urban region, and trigger the convergence of urban design options in both, namely around stations. The pricing system does not define successive zones of increased tariffs the farther one gets from the ‘centre’

but rather measures the number of zones effectively traversed in a journey, regardless of its start and end points, homogenising the price of travel across the urban region.

A further aspect of planning for metropolisation is the conceptual transference of notions of 'urban centrality' to the territorial scale. The project for the Zurich metropolitan region by ETH Basel (2010), led by Diener and Melli, asks where the 'central square' of metropolitan Zurich lies. What focus of identity, accessibility and activity can be used now that the urban is no longer confined to the city? Their extreme proposal is considering a whole bio-physical element – Lake Zurich – as such. They use the lake as a symbolic city centre and urbanisation focus for the region, linking existing loose settlements through a linear expansion providing new urban programmes formerly associated with consolidated city centres – university, congress centre, cultural institutions – integrating the outlook of the lake as an ecological unit into planning and thus changing the perspective on Zurich from a 'compact city plus natural spaces plus sprawling urban region' to an integrated extensive city.

At this point, it is clear that besides being a process happening *de facto* on the ground, as urban regions become more integrated and all parts of the urban region emerge as relevant parts of an extensive city, metropolisation is also a strategy to build upon these potentials, as policies must acknowledge the new conditions: in fact, *"competitiveness as a driving force of metropolisation is a given only if potentials are perceived and activated and transformed into specific assets. Learning processes are crucial between stakeholders on a metropolitan level."* (ESPON, 2012b: 12). In short, the question whether and how large urban systems are becoming integrated must distinguish between a spatial-functional perspective and an institutional dimension, materialised by governance arrangements and planning strategies. They influence each other and should be made to work favourably (Dieleman and Faludi, 1998; Berg et al., 2004).

Like earlier inquiries, this study applies the distinction between a spatial-functional view and an institutional dimension of metropolisation; or, following the argument of ESPON (2012b) above, to consider *potential* and *effective* metropolisation. The empirical work will capture both perspectives, acknowledging that cities are neither a set of actors establishing social and economic interactions without any relation to the territory, nor organically-evolving territories without conscious actors.

### **3.4 Conclusion: metropolisation and second-tier urban regions**

Elaborating on the ideas already expressed in the introduction, this section clarifies the research motivation by summarising the arguments about why it is worthwhile to study the specific research topic of integration in second-tier urban regions and why it is important to address it through the particular lens of metropolisation.

#### **3.4.1 Why is integration important for second-tier urban regions?**

The fundamental hypothesis advanced in the introduction was that second-tier cities have great need and incentive to pursue deeper integration at the urban region scale, especially in contexts in which they are embedded in larger and densely occupied urban regions and face economically and politically dominant national capitals. While integration has been argued as generally beneficial for urban regions, four main reasons, with insights from earlier research, were given to support this hypothesis:

- (1) The potential gains from an increase in size through integration policies are arguably greater for second-tier than primate cities. When comparing their relative dimension as part of a larger urban region with primate city agglomerations in the same context, second-tiers tend to be smaller, with a larger share of population and activity settling elsewhere. This was initially signalled by the ESPON 1.1.1 report (2005), writing that the growth potential from integration with their PIAs (see above) was relatively unimportant for the largest cities, due to their already dominant role in the urban region, but represented a significant increase in size and rank for a majority of mid-sized cities, where the urban region provides a greater critical mass that can potentially be captured.
- (2) Especially in countries with dominant capitals, second-tier cities tend to host fewer urban functions than their demographic weight would suggest (Göddecke-Stellmann et al., 2011). This was discussed in chapter 2 as a contemporary mark of the history of political and economic bias favouring primate cities in Europe (see figure 2.2). Assuming that a potential critical mass of urban functions is also spread across the urban region (chapter 6 will explore this), second-tier cities have greater

need to work with that territory to capture the functional mass and diversity that primate city agglomerations can provide on their own. Integration strategies can help organise these functions as more complementary elements and make them grow by building upon the urban region scale (Meijers et al., 2012).

(3) Second-tier cities tend to be weak interlocutors, compared with dominant capitals, when dealing with national governments in centralised countries. If they can build coalitions with the urban region to become larger and economically more powerful actors, they may not only become more attractive for people and firms, but also acquire a greater political voice and be able to influence more policy decisions (Harding et al., 2010). By contrast, primate cities and capitals are the seat of national political power and tend to be the policy and investment focus of governments and firms; as a rule, they do not need a similar upscaling exercise to enhance their influence and centrality.

(4) Periods of economic downturn, in which available resources must be directed to a set of priorities, may increase the gaps between primate and second-tier cities, as governments push to enhance the position of their leading city and necessarily neglect others (Parkinson et al., 2015; Crouch and Le Galès, 2012). Unable to follow strategies based on adding new resources to strengthen their position, such as the ones proposed by Hodos (2011), lagging second-tier cities may find a relevant alternative strategy in gathering fragmented resources spread across the urban region and working better with them through an integrated strategy.

### **3.4.2 Metropolisation as a fitting lens to explore second-tier urban regions**

It is clear enough that the problems of urban region integration are key features of the whole study. But what will metropolisation, as an interpretative lens to observe the increasing integration of urban regions characterised by forms of extensive urbanisation, add to this exploration? We have seen that the underlying principles of the concept build upon the features of extensive urbanisation and appreciate how they differ from earlier paradigms of urbanisation. But metropolisation, in its three dimensions (a territorial

process, a conceptual shift, and a strategic approach) was argued as relevant to study integration especially in second-tier urban regions. This happens for four reasons:

- (1) The aspects that may best illustrate the specificity of second-tier urban regions can be expressed as manifestations of the features of extensive urbanisation. The introduction discussed arguments from earlier literature that hint at this hypothesis: important urban functions in second-tier urban regions may be more decentralised than in primate urban regions, illustrating more clearly the ubiquity of centrality. The socio-economic configuration of second-tier urban regions may be heterogeneous and layered in a way that confronts the assumptions of territorial isotropy. The historical trajectory of formation of second-tier urban regions may not comply with centrifugal and incremental expansion models typical of larger cities, revealing old and ingrained forms of morphological and demographic dispersion. And a potential for institutional integration that overcomes the barriers of other types of urban region may exist in second-tier urban regions, opening up paths for fine-tuning governance and spatial structures in extensive urbanisation.
- (2) These features suggest a greater role in second-tier urban regions for functional interdependence and complementarity; for non-centrifugal and polycentric forms of urban expansion; for the coexistence of complex socio-economic arrangements and the emergence of economic activity at any point of the territory; and of the consideration of the role of all places in the urban region in cooperation frameworks regardless of their hierarchy. All these aspects are contained in the underlying principles of the metropolisation concept.
- (3) The idea that second-tier cities have greater need to integrate with their urban regions to counter their shortcoming regarding size, functions and political voice and to increase resource efficiency implies a desire for a larger, economically stronger, better equipped and more diverse urban entity. A sum of small, interconnected urban centres does not offer the same functional and economic benefits of a single, integrated agglomeration (Meijers, 2008; Ahrend et al., 2015), nor a similarly strong political and cultural identity (Lambregts, 2006). The



concept of an emergent 'extensive city', seen as a continuous organism rather than a set of linked nodes, with urbanity emerging at any point of the territory, and whose full features and qualities are apparent only at the urban region scale, potentially provides such a framework.

- (4) The 'extensive city' concept was described as a process of citification of the region rather than of regionalisation of the city. This means that, alongside a process of consolidation and integration of previously fragmented and disperse urban entities, a parallel trajectory of rescaling and reconstruction of the features, qualities and devices formerly reserved for selected cities must take place at the urban region scale. Besides the interest that second-tier cities may have in this upscaling exercise of their urban identity, their role as leading but not dominant cores of the urban region may also make the surrounding actors more willing to accept, and to profit from, that expansion of the second-tier city identity.

This chapter has discussed the main features of the extensive urbanisation paradigm and presented the problem of the urban region under that light. It suggested that these features generally provide the underlying spatial and institutional conditions for integration processes but may be particularly visible in the configuration of second-tier urban regions. Then the concept of metropolisation was discussed, as a way to conceive urban regions and describe spatial processes and integration strategies in territories characterised by forms of extensive urbanisation. Metropolisation was argued as an appropriate lens to explore the specific aspects of integration in second-tier urban regions. But to understand how this arguably urgent and beneficial process occurs, what is special about it, and how much second-tier urban regions are able to pursue it, we need to know more about its specific features, namely by asking what differentiates second-tier urban regions and how these differences affect their forms of integration. The next chapter will present the research design, retrieving the two research questions advanced in the introduction and discussing the appropriate methodologies to address them.

## CHAPTER FOUR. Research design and methodology

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We have now seen why second-tier cities need particular attention in many European countries, why they can be considered a specific research and policy issue, and what is lacking in the analysis of their transformation into large and integrated urban regions. The integration of urban regions is an important concern of European research and policy, but the context of extensive urbanisation in which it now occurs puts that problem into a new perspective, which can be best addressed through the interpretative lens of metropolisation. The argument that second-tier cities may have an added incentive to engage in integration adds relevance to this largely unexplored research topic. This demands an account of their specificity, as we do not know how some of the factors considered relevant for integration processes differ in second-tier urban regions, and how these differences affect their ability to pursue metropolisation. These gaps lead to the two core research questions presented in the introduction and framed below. In summary, the task of this research is to explore the distinctive functional, spatial, socio-economic and institutional characteristics of second-tier urban regions in meaningful ways, argue their centrality as factors for integration processes, and evaluate whether the differences detected play a role in the way those processes take place.

This will be achieved by four empirical chapters which address the aspects above. But before entering that stage, this chapter describes the research design. Section 4.1 starts by retracing the path to the two core research questions proposed earlier and explain the considerations framing their precise focus and formulation. Section 4.2 addresses the methodological implications emerging from the theoretical framework built so far. The discussion resumes the critique of the different understanding of cities by comparative urban research started in chapter 2 and proposes an approach based on differentiation and specificity, more interested in explaining why each instance answers the research question differently than defining universal qualities for a phenomenon. This builds upon the variants of comparative methods developed by Tilly (1984) to conclude that the general arguments presented by chapters 2 and 3 define an epistemological position which is more integrative than selective, and more interested in

continuous gradients than nodal hierarchies. But this is not an exclusively individualising method and the study tries to expand the relevance of the findings by looking for linkages between these specificities, leading to the definition of a set of contrasts between second-tier urban regions and other urban regions and a set of features which they generally share. This is followed by an explanation, in sub-section 4.2.2, of how such methodological options shape the design of the empirical study. Overall, the structure progresses from quantitative findings, more focused on detecting patterns, to deeper qualitative findings, more interested in inferring causes. The first problem is the need to adapt the comparative structure in each empirical chapter according to the purpose of the comparison, the aspects analysed and the nature of available data. The second problem concerns matching the four analytic aspects used to triangulate the research findings to each stage of the comparison and integrating them into a single argument. The advantages and limitations of this problem-driven methodology are pointed out. The chapter continues with an account of how the main research questions are narrowed down and made concrete by a set of sub-questions resolved by the empirical chapters and their respective techniques. Such techniques are described in detail in the chapter-by-chapter summary of section 4.3, leading to a short conclusion in section 4.4, which closes Part 1 of this thesis.

#### **4.1 Framing the research questions**

The two main research questions of this study were advanced in the introduction, together with the theoretical arguments and contributions from earlier literature that justify them. This section is dedicated to frame them in greater detail by explaining their focus and why they are formulated precisely in this way.

***Research question #1: Is there a relevant set of features in which second-tier urban regions are fundamentally different from other urban regions?***

*“Cities, even locally and individually considered, are territories, in the sense that their typical activities are continuously sustained by fixed assets incorporated in the physical space of the urban.” (Dematteis, 2003: 199, my translation)*

Second-tier urban regions may have an interest in pursuing integration efforts, but this does not occur spontaneously. The form and orientation of integration processes and the successful outcome of integration strategies depend on the underlying spatial and institutional contexts (Batten, 1995; Champion, 2001; Lambregts, 2006), which are not an indifferent background for human interaction, but generative elements that co-produce their own conditions for change and development (Soja, 2003). The relevance of spatial contexts is often neglected in face of the apparent immateriality of economic interactions, “*an abstraction, something immaterial, almost as if produced in thin air or under any sort of material condition*” (Netto, 2010). Also, when confronted with the progression of urbanisation across the territory and the difficulties of its delimitation, many authors opt for the minimalist definition that the ‘urban’ is everything and everywhere (Brenner and Schmid, 2011). Such claims lack empirical precision as well as criteria to support distinctions and qualify different forms of urbanity, and often lapse into “*strict doctrine*” (Frei, 2006: 70) bordering on the metaphorical. Following a different approach, this study assumes that urbanisation may be near-ubiquitous, but emerges in profoundly material and localised conditions. As such, the study has an interest in what differentiates the spatial structures and dynamics of specific urban regions, while acknowledging that the existing institutional arrangements both influence and are influenced by those structures and dynamics.

In short, the specificity of places is important, and chapter 2 gave an account of the efforts by earlier research to find the distinctive characteristics of second-tier cities. But we have seen that such efforts were limited in scope – they mostly dealt with socio-economic, cultural and historical features – as well as in scale – they kept to a theoretically bounded view of the ‘city’ as a historical and culturally defined site. As a result, there are important gaps in determining the spatial and institutional features that may differentiate second-tier from other cities and in considering the scale where the differences are arguably more visible, namely the urban region. Researchers have seen second-tier cities as a specific typology (Markusen et al., 1999; Hodos, 2007; 2011) and a specific policy focus (ESPON, 2012a; Parkinson et al., 2015) but we do not know yet the distinctive characteristics, both in the historical route towards an urban region and in the

way that urban region is spatially organised today in a context of extensive urbanisation, that turn them into a specific research and policy problem of city-regional integration.

*Why focus on the distinction between second-tier and primate urban regions?*

The argument above justifies the formulation of the first research question, which focuses more strongly on the distinction between second-tier and primate urban regions, rather than other mid-sized or small cities, or even ‘polycentric urban regions’ (Kloosterman and Musterd, 2001; Parr, 2004). This happens for two reasons.

First, we have seen that the criteria to define second-tier cities and select relevant cases are related to their role in national urban hierarchies and, by extension, their relation to capital cities. The arguments about second-tier cities as a specific urban typology and a policy priority for economic development tend to make their case through comparisons with capitals. They suggest that the need for greater attention to second-tiers is related to the extent of dominance exercised by capitals and that their best development options should build upon their ability to be distinctive. Nonetheless research has often uncritically dismissed second-tier cities as ‘downgraded’ copies of primate cities, or “*global cities lite*” (Hodos, 2011: 6). More than simply bounding a ‘second-tier city’ typology as an intellectual exercise, this turns the quest for differentiation specifically between second-tier and primate cities more pressing.

Second, research about the urban region scale has often followed a dual framework distinguishing ‘polycentric urban regions’ from everything else that does not qualify as such, but has not systematically subdivided the latter into more precise models. This leads to an assumed ‘either-or’ duality between monocentric, centrifugal and hierarchic urban systems, on one side, and polycentric, multidirectional and networked urban systems on the other. Table 4.1 illustrates those differences:

Characteristic	Hierarchic	Networked
Morphology	One main centre; significant separation city/countryside	Several centres in close proximity, of relatively similar importance
Functional linkages	Unidirectional; directed at main centre; no relations between secondary centres	Multidirectional; two-way linkages core/periphery + secondary centres
Spatial constellation	Monocentric metropolitan area	Network city / PUR
Relation betw. spatial units	Tendency to competition, local orientation and dependence from core	Tendency to complementarity and regional cooperation
Economic specialisation	Functions dependent on size of centre, higher order functions in larger centres	Functions independent of size of centre, dependent on network position
Economic externalities	Agglomeration (dis)economies restricted to main urban centre	Agglomeration economies shared among many centres of similar size

Can something else appear in between?

**Table 4.1** – The two dominant configurations of urban systems and the hypothesis of inserting another model in between (source: adapted from Burger et al., 2014).

The differences between both models have been explored in detail (Batten, 1995; Dieleman and Faludi, 1998; Burger et al., 2014), as well as the shift from the former to the latter in many urban regions (Hall and Pain, 2006; Burger et al., 2015). However, this classification neglects mixed models that may not sit comfortably in this duality because they have clear characteristics of both systems or do not quite exhibit the features described by either. This research question relies on that notion to propose that, beyond the well explored differences between the two variants above, second-tier urban regions may in many aspects represent a distinctive kind of urban system with mixed characteristics, situated somewhere in between the dominant descriptions above.

A good way to assess this is by considering that not all urban regions have changed from monocentric to polycentric forms, or hierarchic to networked systems, due to “*a long process of very extended decentralisation from big central cities to adjacent smaller ones, old and new*” (Hall and Pain, 2006: 3) - see the discussion in section 3.2.2 above. Indeed, “*many studies assume, often implicitly, that urban systems evolve from a monocentric spatial structure towards some form of polycentric spatial structure [...] the spatial structure of city regions does not necessarily have to change in the same direction.*” (Burger et al., 2011: 161). The introduction has already referred to arguments

from earlier research hinting at a more nuanced pattern when not only the present state of urban systems but also their trajectory in time is considered (Heynen et al., 1991; Hohenberg, 2004; Font, 2004; Schneider and Woodcock, 2008). Many such descriptions point out the different roles of core cities in the development and current form of urban regions. They stress the dominant role of 'first order' cities, relying on centrifugal and intensive expansion, large-to-small decentralisation, and the projection of a political and economic agenda over their hinterland, which overrides pre-existing local processes and configurations. This is compared to weaker, 'second order' cities, which were never sufficiently large and powerful to acquire such abilities, and therefore neither gathered enough critical mass to then 'decentralise' their activity, nor could exercise a significant influence over the localised processes occurring in different places of the region. Although the latter have also turned into polycentric urban systems, the characterisation of their specific features and integration processes remains to be achieved.

This leads to the proposal that, both in terms of historical trajectory and current spatial, functional and socio-economic configurations, second-tier and primate urban regions do not necessarily belong to a homogeneous set outside the world of 'polycentric urban regions', and justifies the particular focus of the research question. An important contribution to this effort for greater nuance was provided by Champion (2001) and his tri-partite model of urban region formation. As discussed earlier, Champion inserts an 'incorporation mode' between the usually accepted centrifugal and fusion modes, which, as this study will repeatedly assess, may illustrate rather well not only the historical formation but also the present state of many second-tier urban regions.

***Research question #2: Do these differences affect integration processes and provide second-tier urban regions with greater ability to pursue integration strategies?***

*“The process of territorial diffusion and dispersion of people, activities and functions represent neither a promise of nor a search for autonomy from those territories, but rather a different and more extensive mode to build relations and interdependences. A different mode to produce the ‘city’.” (Indovina, 2004: 15, my translation)*

The first consideration orienting the focus of the second research question is that, quite often, the concept of integration has been forced into a dual framework similar to the description of urban systems above. In broad terms, and accepting that virtually any urban region can be seen today as a polycentric entity tending towards integration (Hall, 1997), the process can take place within a hierarchical system that equates more 'advanced' integration with a nested organisation of dependencies structured around a dominant centre, a core-periphery gradient of effective political power, and a clear-cut distribution of ancillary economic specialisations in the different secondary centres of the urban region; in this case, the more the core has cast a spatial, functional and institutional hierarchy over the polycentric urban region and defined the shape of its decentralisation, the greater the 'integration' (Goei et al., 2010). An opposite view describes 'integration' as the outcome of the increasingly popular concept of urban networks, and sees the process more advanced when there is greater complementarity of functions and specialised activities among a set of smaller centres, a balanced distribution of population density, similar economic prosperity and commuting flows among all nodes of the polycentric system, and a tendency for effective institutional cooperation between them (Batten, 1995; Parr, 2004; Neal, 2012; Meijers et al., 2014).

The hypotheses proposed here about the specific features of second-tier urban regions distance them from both descriptions. They are clearly not polycentric urban regions, in the sense that they are not structured by several centres of similar importance in close proximity to each other, but they may also not correspond to the hierarchic integration model. We have seen that several arguments spread across different pieces of research suggest that, within certain conditions related to their national urban system and the history and dynamics of the territorial urbanisation around them, second-tier cities may be more benign to the wider urban region than those broadly emerging from a history of core city decentralisation over an assumed spatial and historical 'void'. These cities keep their role as leading cores of the urban region but may allow a more balanced functional distribution, less hierarchic socio-economic configurations, more dispersed forms of urban growth, and a more collaborative institutional environment.

The relevance of this research question lies in the fact that this can result in different and less explored forms of integration, whose advancement is neither assessed



by the outward reach and tightness of hierarchies nor by the balance of interdependences and complementarity, but rather by the outcome of the spatial, functional and institutional process of 'citification of the region' proposed above. As implied in the concept of metropolisation, such a process of integration is more advanced when actors in the urban region recognise demographic, functional, socio-economic, political and historical factors that allow them to conceive their role as differentiated components of a single extensive city.

*Which second-tier urban regions should be observed?*

This research question explores what shape this kind of integration can assume, but is framed by a second issue, namely which second-tier urban regions are more likely to engage in such a process. Two aspects must be considered in this regard, concerning both the *incentive* and the *appropriateness* for metropolisation. Although their full assessment is a task of the empirical chapters, these two aspects can be approximated with relative simplicity to assist the selection of the case studies, as chapter 5 will show. First, the arguments so far have proposed that second-tier cities in countries with dominant capitals are more likely to (wish to) pursue upscaling exercises, of which urban region integration is a rather promising kind, in the interest of both the core city and the surrounding urban area. Second, there can be second-tier urban regions whose territorial structure is more appropriate than others for a metropolisation process. Given the hypotheses proposed earlier, important features would be a not overly dominant relation between core and periphery in terms of political power and share of population and activity captured, and embeddedness in a larger and densely urbanised territory, where both the core city and smaller centres can capture the benefits of a larger urban entity.

*Which aspects should be analysed?*

The last consideration framing this research question is exactly what features of differentiation of second-tier urban regions are more useful to observe. Four aspects were proposed in the introduction: the presence and spread of urban functions, the socio-economic aggregation of population, the historical trajectory of urbanisation, and the

dynamics of institutional cooperation. They have not been systematically explored yet, but are hinted at by previous literature as providing significant contrasts, in particular between second-tier and primate urban regions. In addition, we have seen that the way in which second-tier urban regions may differ in this respect is also an expression of their greater embeddedness in the features of extensive urbanisation. Lastly, we have added that these four aspects are also important factors influencing integration. Within the spatial and institutional dimensions usually used to observe integration (Berg et al., 2004; Nissen, 2008), earlier literature has argued the role of functional synergies and linkages between complementary functions (Batten, 1995; Meijers and Burger, 2015); the impact of the overall socio-economic structure of the urban region on the attractiveness of individual centres and on their mutual functional and power relations (Champion, 2001; Burger et al., 2015); the importance of early forms of urban growth as providers of the infrastructural, cadastral and morphological sub-structure where contemporary urban forms negotiate their location (Champion, 2001; Font, 2004; Lambregts, 2006); and the value and fragility of the conditions for a collaborative institutional environment pursuing integration (Lefèvre, 1998; Nelles, 2013). As the next section will discuss, analysing these aspects separately in a way that each set of findings can be relevant on its own, but making the core argument flow along all chapters, rather than building different arguments from each set of findings, is a key concern of the research design.

## **4.2 Emerging methodological options**

Chapters 2 and 3 delineated a theoretical framework which implies certain methodological options. These options define, in turn, the way in which the research questions can be answered. This section will address those issues, first by discussing the broad methodological approach emerging from the theory, and then explaining what kind of research design is appropriate to turn this approach operative.

### **4.2.1 Hierarchy and specificity in comparative urban research**

The two previous chapters produced two general arguments whose underlying epistemological position is similar. They emerge from an understanding of cities and

urban regions which is not based on generalising rankings and judgemental hierarchies but on the consideration of differentiation and the specificity of individual instances of a phenomenon: “*Social science [...] has in the final instance nothing else to offer than concrete, context-dependent knowledge.*” (Flyvbjerg, 2006: 223). Chapter 2 claimed that second-tier cities should be seen, individually and as a group, as a specific research concern rather than hierarchised in a larger system led by primate cities; and that they should be approached in differentiated ways through meaningful criteria, to allow for a more nuanced and elaborated understanding of cities (Connolly, 2008; Hodos, 2011; Chen and Kanna, 2012). Chapter 3 stated that the concept of metropolisation, as a way to read integration processes, sees urban regions as the coalescence of different and specific forms of urbanisation, each with their particular qualities and history, rather than opting for a spatially selective and hierarchising view of cities surrounded by ‘other’ spaces (Domingues, 2008; Vaughan et al., 2009; Brenner, 2014; Harrison and Heley, 2015).

Both statements present a view of their object of analysis which is integrative rather than selective, and privileges continuous ‘gradients’ rather than nodal ‘hierarchies’ (Neuman and Hull, 2009). It looks for the place-specific variations of a phenomenon rather than exclusionary indicators and flattening classifications within a larger system. Chapter 2 confronts the ‘metropolitan bias’ (Connolly, 2008) that focuses the attention on the largest cities and designs research frameworks according to their characteristics and interests, neglecting alternative perspectives. Chapter 3 departs from ‘methodological cityism’ (Brenner, 2014) that gives too much attention to ‘cities’ as bounded and historically-culturally defined sites and neglects the contexts and qualities of the larger urbanised territories beyond them.

According to Brenner (2001), building upon the variants of comparative research defined by Tilly (1984), contextually and historically embedded comparative studies of this kind are a welcome addition to the dominant approach dedicated to qualify the relations of specific instances to a larger overall superstructure or to check whether all instances follow the same rules<sup>26</sup>. Each mode of comparison has its internal logic and its analytical and empirical payoffs (Brenner, 2001: 127). Tilly proposes four variants:

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<sup>26</sup> Brenner’s analysis of comparative methods refers to the contribution of Janet Abu-Lughod’s book *New York, Chicago, Los Angeles: America’s Global Cities* (1999) to world city theory. He

- (1) Universalising comparisons aiming “*to establish that every instance of a given phenomenon follows essentially the same rule.*” (Tilly, 1984: 82).
- (2) Encompassing comparisons placing “*different instances at various locations within the same system, on the way to explaining their characteristics as a function of their varying relationship to the system as a whole.*” (ibid.: 83).
- (3) Variation-finding comparisons defining “*a principle of variation in the character or intensity of a phenomenon by examining systematic differences among instances.*” (ibid: 82).
- (4) Individualising comparisons contrasting “*specific instances of a given phenomenon as a means to grasping the peculiarities of each case.*” (ibid.: 82).

The first two comparative approaches contain assumptions that the research so far has refused, when opting for a definition of ‘second-tier city’ that avoids the rank-based bias of functional hierarchies, and for a conception of the urban region that departs from negative comparisons of ‘lesser’ places to ‘proper’ cities. Such classifications express the universalising and encompassing methods, as all instances under comparison, regardless of their contexts, are measured against the benchmark of a larger overall system and encouraged to climb in whatever indicators that system privileges in its analysis. The way this “*systematically conditions local outcomes*” (Brenner, 2001: 139) is echoed in the arguments by Van Heur (2011) about how comparisons to primate city standards restrict the amount of imaginable development strategies in other cities. The discussion in section 2.2.1 reminds us that this ‘entries rather than entities’ approach to cities typically results in an oversimplification of their problems and possibilities, seen as following essentially the same rules everywhere (Robinson, 2006), and in the production of equalising one-size-fits-all urban policies (Gleeson, 2012). In the same logic, but applied to the different parts of the urban region, Vaughan et al. (2009) point out how a one-dimensional view of the ‘suburban’ as something merely produced at some point by the

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particularly welcomes her comparative-historical method to explain geo-economic changes beyond the simple response to larger globalisation processes. Nonetheless, the methods distilled by Tilly (1984) are not restricted to interpretations of world city theory in globalisation. They are seen as different ways of improving our understanding of social change (Tilly, 1984: 2).

expanding ‘urban’ restricts the consideration of its history and theoretical complexity. Here we can see the ‘universalising’ dimension of such comparisons, characterised by *“the translocal convergence of specific outcomes”* (Brenner, 2001: 139).

The inescapable variety of economic, political, social, historical and urban contexts in European urban regions turns the encompassing and universalising methods rather inappropriate for the purposes of this research. The discussion must depart from analytic aspects generically defined as appropriate for *all* cities and *all* forms of the urban, whose *“scientific recognition is based on the fact that it meets the requirements of the parties interested in [...] policy”* (Göddecke-Stellmann et al., 2011) and define specific research criteria especially relevant for the object of study. The point is to study second-tier urban regions on their own terms and highlight their distinctive features according to these criteria. This justifies a method that weaves the core argument around representative case studies and explores them through a mixed methodology of variation-finding and individualising comparisons. Indeed, while most studies follow a dominant approach, many researchers resort to more than one comparative method to fine tune their analysis (Brenner, 2001). The use of two complementary methods here mainly relates to the fact that there are two main research questions, each demanding a different approach.

#### *The role of complementary comparative methods*

At a theoretical level, it seems appropriate to frame the study within a variation-finding method. After all, the purpose of the first research question is to examine ‘systematic differences among instances’ – second-tier urban regions vs. primate urban regions – not as different entries in the same universal hierarchy, but as entities with a fundamentally different character in light of the chosen aspects of analysis. However, the previous chapters also remind us that there are limits to the generalisation of city types: second-tier urban regions may well differ in fundamental matters from primate urban regions, but they equally differ among themselves. That is more significant for the second research question: even if a common set of distinctive features of second-tier urban regions is detected by the first step of analysis, it is likely that such features affect integration processes differently in individual second-tier urban regions. This is because

their individual contexts will change, namely regarding the way the analysed aspects interact to intensify or diminish each other's role in the process, and the way they are acknowledged and built upon by the institutional actors in the urban region.

Therefore, a method that uncovers the shared features and defines the specific character of second-tier urban regions does not fully respond to the research questions. It needs to be complemented by an 'individualising comparison' that focuses on the context-dependent, smaller-scale variations to 'grasp the peculiarities of each case'. In summary, there is a double quest of defining a 'region of variability', in which the different trajectories and configurations of second-tier urban regions unfold (variation-finding comparison) and looking for specificities in individual cases that explain why they answer the research questions differently (individualising comparison). The empirical part of the study will move from one to the other, to produce a more specific and nuanced picture of how much second-tier urban regions differ from or coincide with primate urban regions, and how much they differ or coincide amongst themselves.

#### **4.2.2 Shaping the empirical research**

This methodological approach leads to two basic research design options. The first relates to how to move from one to the other method of comparison in a way that the findings move from the quantitative to the qualitative and add up to a more thorough picture of the research object. The second is concerned with how to integrate the four sequential aspects used to triangulate the analysis into the flow of a consistent argument.

The complementarity between a variation-finding and an individualising method of comparison is expressed in the structure of the empirical chapters. In broad terms, it can be seen as an explanatory sequential design, gradually progressing from general and quantitative findings to specific and qualitative interpretations (Creswell and Clark, 2011). The comparative method of the research is designed according to three purposes:

- Define a 'region of variability' where second-tier urban regions operate and establish its common features. Region of variability is a concept often used in mathematics, meaning simply a delimited area where the results of certain variables of a function tend to aggregate. It is used here in a similar sense.

- Highlight overall contrasts between second-tier and other urban regions (namely primate urban regions) that are generally kept regardless of the differences between the individual instances of both sets.
- Explore the individual specificities of second-tier urban regions whose shared features situate them in the same region of variability and which share a common pattern of contrasts to primate urban-regions, but whose specific contexts affect the way they answer the research questions.

Each empirical chapter contributes to all these purposes but gives more attention to one of them, requiring adaptations of the analytic methods and the use of case studies:

- The first purpose justifies a wide-ranging comparison which covers many instances of both primate and second-tier urban regions. Even if the main case studies are highlighted at some points of the analysis, the broader comparison provides more compelling evidence about the scope of the 'region of variability'.
- The second purpose is best illustrated by a bilateral comparison between a set of representative case studies of second-tier urban regions and the primate urban regions with which they are more closely connected, namely their capitals.
- The third purpose can be addressed by a detailed comparative account of the specific features, similarities and differences of each case study, particularly in aspects which are likely to be more affected by local contexts.

After establishing this set of purposes and the methods to achieve them, all that is left is looking for the best way to match the previously defined aspects of analysis to this structure. Considering that the most logical order to present the findings is the one depicted above, the first factor is the likelihood of each aspect to serve well each purpose of the comparison. For example, there is much literature comparing functional configurations in urban regions across Europe (ESPON, 2007; Göddecke-Stellmann, 2011) following common and solid methods, which suggests that this analytic feature is methodologically appropriate for a wide-ranging comparison of many cases. By contrast, institutional arrangements and historical trajectories of urban growth are more likely to

be affected by local contexts and, in methodological terms, will arguably be more helpful to compare fewer instances and highlight the nuances and peculiarities of each particular case, than to provide an overall description of second-tier urban regions.

A second and perhaps less tentative factor of organisation is based on very pragmatic decisions related to the availability of data and the opportunity to employ it to the advantage of the study. The chapter-by-chapter account of the empirical chapters below will show the relevance of considering the widest possible set of tools and datasets. For instance, the urban functions analysis builds upon a European dataset (Göddecke-Stellmann et al., 2011) whose thoroughness turns it into “*the ‘gold standard’ for this kind of comparative analysis*” (Hall, 2013b). The socio-economic analysis is supported by a geodemographic database which happens to exist precisely for the capital and second-tier city in one of the case studies (INE, 2014) and can easily be related to methodologically similar analyses in the other two. In other words, the study arguably waives some methodological uniformity in order to add richness to its contents and expand the relevance of its findings. According to Flyvbjerg, “[g]ood social science is problem-driven and not methodology-driven in the sense that it employs those methods that [...] best help answer the research questions at hand.” (Flyvbjerg, 2006: 242). In the end, the study may contain more fragmentation and methodological tensions than studies considering a single question and a single aspect of analysis, but this “*methodologically eclectic*” (Brenner, 2001: 144) approach has the potential to illuminate the research problem from multiple perspectives and provide more insights on the questions at hand. The table below summarises the different scope of comparisons in the empirical chapters 6 to 9:

Chapter 6	Chapter 7	Chapter 8	Chapter 9
Urban functions	Socio-economic configuration	History of urban growth	Institutional arrangements
26 primate cities + 112 second-tier cities	Porto vs. Lisbon Bristol vs. London Brussels vs. Antwerp	Porto Bristol Antwerp	Porto Bristol Antwerp

**Table 4.2** – Topics of analysis and comparative scope of chapters 6 to 9.



### *Integrating the aspects under analysis into the argument*

The four aspects previously selected as the best to portrait the specific features of second-tier urban regions and characterise their integration processes are not isolated and have the potential to interact to intensify or diminish each other's role in such processes. They may also imply different answers to the research questions. Indeed, studying them in conjunction is important because it cannot be assumed that their concrete manifestations are isomorphic, or that one can be inferred from others (Neuman and Hull, 2009). Many authors point out that different conclusions about the integration of urban regions can be reached depending on the aspects observed: *“results dispute the assumption that functional, cultural and institutional contexts of these metropolitan areas are similar”* (Meijers et al., 2012: 10) The functional integration of a polycentric urban region may occur over the deep imbalances of a strongly hierarchic socio-economic structure. Functional, morphological and socio-economic relations may suggest the urgency of institutional integration, but the reason why that is not happening may be hidden in the specific historical trajectory of formation of the urban region. No town, city or urban region ever functioned as a unitary actor; assuming a potentially fertile ground for a metropolisation process through the analysis of one component of the structure of an urban region may be misleading if this potential is hampered by the counterproductive role of other components. Therefore, a conjugated analysis is the best way to uncover their potential lack of correspondence and explain the variations of particular cases even when some of their dimensions look similar.

Nonetheless, the different focus of the four analytic aspects also means that each one can provide relevant findings on its own. The sub-questions framing each aspect, detailed in the next section, are relevant research questions in their own right. So the balance between allowing each analytic aspect to stand alone and produce a relevant set of findings, and keeping a consistent core argument flowing throughout the thesis is a key concern of the research design. This implies some decisions to achieve this balance and provide a clear organisation to the study. The first is clearly attributing one empirical chapter to one analytic aspect. Urban functions, socio-economic structure, historical trajectory and institutional arrangements will be analysed in separate chapters that also stand as individual thematic pieces of research (e.g. they should allow the production of a

research paper). As discussed, the order in which these pieces are presented and the type of comparisons depend on how well they fit the progression from the general to the specific, and, importantly, what data is available to better serve the research.

But the individual value of the empirical chapters and the logic of attributing a single aspect of the analysis to each one should not harm the unfolding of a single argument in response to the research questions. As such, all chapters will be given equal importance: the argument is developed sequentially throughout the thesis and captures, in its progression, the contributions of the individual analyses, rather than reaching a climax in a particular 'core' chapter. Then, to avoid building unrelated sets of findings in the chapters, each will provide its results while simultaneously commenting on what they mean to the findings of the previous chapters and to the argument so far. Finally, great attention will be given to the last chapter of the study (chapter 10), where all the components of the analysis come together and the key conclusions are drawn.

#### **4.2.3 Designing the operative sub-questions**

The two main research questions are narrowed down and made concrete by a set of sub-questions about four specific analytic aspects of second-tier urban regions that chapters 6 to 9 will address. To serve the purposes of the comparative framework and better employ the available data to the advantage of the research, the scope of their inquiry changes from chapter to chapter. The questions assume the dual dimension of metropolisation as a territorial process and an institutional strategy and recognise that the former is of little value if it is not acknowledged by the latter, but the latter may be misplaced if not informed by a deep understanding of the former:

- (1) How does the overall presence of urban functions compare in primate and second-tier urban regions? Do the former enjoy a 'primate city bias' that changes between countries? Is the distribution of functions more interdependent and balanced and less subject to core-periphery contrasts in second-tiers? Do primate cities cast a functional agglomeration shadow over their hinterland? And are smaller centres in

second-tier 'extensive cities' better served by urban functions? Does this suggest a greater incentive for integration in second-tier urban regions?

- (2) Do the functional contrasts detected find a correlate in a different socio-economic structure of second-tier urban regions, when compared to their national capitals, known to have evolved in a more centrifugal mode? How does this affect both their large-scale organisation and the socio-economic diversity of individual centres? Can common contrasts between capitals and second-tiers be detected for all three cases, despite their individual differences?
- (3) What was the historical route towards the emergence of the type of urban region implied above and does it help explain its features? Can an analysis that looks at the role of both core cities and other urbanised spaces uncover a route with similar features in different second-tier urban regions? Is their dominant development form closer to Champion's incorporation mode, i.e. outside the accepted duality between large, primate cities and classic polycentric urban regions?
- (4) Do the configurations detected so far produce a specific political-institutional landscape unlike primate urban regions and PURs, in which all places in the second-tier urban region are more willing to cooperate and engage in integration strategies towards building a shared extensive city? Do political actors consider the implications of not having an overly dominant centre or a set of equivalent centres lacking a leading focus, as a way to produce fertile ground for such collaboration? What influences the outcome of existing strategies?

### **4.3 Chapter-by-chapter methods and techniques**

This section is dedicated to explain in greater detail the methods followed in the empirical chapters 6 to 9. They constitute Part 2 of this thesis, 'Analysing the second-tier urban region' and will be preceded by an introductory chapter (ch. 5) dedicated to present the main case studies and justify the relevance of their selection. As discussed in the methodological section, both the scope of comparisons and the aspects under analysis change from chapter to chapter, which requires the use of different techniques to produce the final results in each one. What follows is their account.

#### 4.3.1 Chapter 6: analysing the presence and spread of urban functions

The questions about the presence and the spatial distribution of urban functions in primate and second-tier urban regions are answered by a comparative analysis covering a wide range of instances in Europe. It is divided in four steps measuring differences in the presence of urban functions, their variation in different urban systems, how the size of the urban region affects the functional performance of the core, and the relative spread of functions across the various parts of the urban region. The techniques used are framed by (1) the definition of primate and second-tier cities part of the analysis; (2) the data sources and their geographical detail; and (3) the choice of variables in the models<sup>27</sup>.

##### *Defining primate and second-tier cities*

To define the cities relevant to the analysis, minor adjustments were made to the list provided by the ESPON report on second-tier cities (2012a). In this framework, all capitals are considered ‘first-tier’ cities; second-tiers are defined as “*cities outside the capital whose economic and social performance is sufficiently important to affect the potential performance of the national economy*” (2012a: 3)<sup>28</sup>; in small countries (under 15 million) all cities that qualify as ‘metro regions’ according to OECD/DG-Regio definitions are included; in larger countries, this refers only to cities adding to the first 66.7% of total metropolitan population (excluding the capital). Zurich replaced the Swiss capital Bern as a ‘first-tier’ city, given its demographic and economic importance; following the discussion in section 2.2.3, cities with a larger GDP than their capitals (Munich, Hamburg, Frankfurt, Milan) or with a historical-political role as ‘pseudo-capitals’ (Barcelona) were also not considered second-tier cities. Finally, smaller

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<sup>27</sup> The analysis presented in this chapter, including the definition of its methodology, was published as a journal article: Cardoso, R. and Meijers, E. (2016). Contrasts between First-tier and Second-tier Cities in Europe: a functional perspective. *European Planning Studies*.

<sup>28</sup> The ESPON research mentioned makes a distinction between ‘first-tier’ cities (capitals) which are ‘primate’ (London, Paris) and those which are not (Berlin). Therefore, for greater clarification, the paper where this analysis appears refers to ‘first-tier’ and ‘second-tier’ cities. However, the overall argument of this thesis does provide sufficient explanation for the ‘primate’ vs. ‘second-tier’ city contrast, and uses both terms extensively, which is why the cities under analysis will be henceforth be referred to as ‘primate cities/urban regions’, despite the ESPON distinctions.

countries that did not contain a second city at all were excluded, as well as Croatia, due to the absence of some necessary data. Chapter 6 will present the final selection of cities.

#### *Data sources and geographical detail*

The database on the location of urban functions was obtained from the German Federal Institute for Research on Building, Urban Affairs and Spatial Development- BBSR (Göddecke-Stellmann et al., 2011). The analysis initially focuses on top-level urban functions in four domains: 'Economy' (top-500 firms, advanced producer services, banks etc.); 'Science' (universities, international research organisations etc.); 'Culture' (events such as concerts, art fairs and film festivals, and venues such as theatres, concert halls and museums); and 'Sports' (stadiums, sports events, etc.). The analysis considers indexes for these domains with a primary focus on an aggregate index of all urban functions.

The scores were calculated for a variety of spatial delimitations, starting with Eurostat LAU2 units (generally the municipality) that provide the building blocks for larger delimitations. The main unit of analysis is the urban agglomeration, understood as the 'Morphological Urban Area' (MUA) defined by ESPON (2007). The database contains 1,963 MUAs identified in the EU25, Norway and Switzerland, including, but not restricted to, those classified here as primate and second-tier cities. To proxy the 'hinterland' in the analysis, the 'Functional Urban Area' (FUA) is considered, except in cases where ESPON defines contiguous FUAs, in which case the PolyFUA is used. Finally, in the last part of the analysis, about the distribution of urban functions across the different parts of the urban region (core city, MUA, FUA/polyFUA), the wider urban region is added, as defined by the BBSR study. This is constructed from a functional perspective, as sets of urban functions clustered according to 60-minute accessibility.

#### *Variables in the models*

The presence of urban functions in MUAs is explained using a variety of explanatory factors. This includes their size, as well as the size of their 'hinterland', measured as the population of the FUA/PolyFUA minus the population of the MUA. Several studies mention the importance of a city's embeddedness in large-scale networks of all kinds –

firms, capital, knowledge, goods – for its performance (Neal, 2012) and for the presence of urban functions (Meijers et al., 2015). Therefore, the embeddedness of cities in international networks is assessed by three control variables: political offices (EU institutions, international organisations), tourism (world heritage sites, Michelin-starred destinations) and flight connections (passenger and cargo). They are also part of the list of urban functions in the BBSR study. In the first part of the analysis, focused on the presence of urban functions, they act as controls in the regression models, but in the last part, focused on the spatial distribution of urban functions, their location in the urban region is also included in the measurements.

Finally, country dummies are used to control for institutional differences between countries. The variables of greater interest include a dummy indicating whether a city is a primate city, and another indicating whether it is a second-tier city. A number of interaction terms explore how the effects of these two dummy variables are mediated by other variables. One of them is the shape of the national urban system, classified on a monocentric-polycentric axis provided by Meijers and Sandberg (2008), who proxy the ‘flatness’ of national urban systems through the slope of the regression line that best fits their rank-size distribution. Another interaction term explores whether the size of the FUA/PolyFUA matters more for the functional performance of primate or second-tier cities. Table 4.2 presents descriptives for all these variables.

	<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>	<i>Std. Dev.</i>
Size MUA (*1000)	10	9,591	134.56	411.60
Size hinterland (FUA) (*1000)	0	13,699	860.53	2,162.03
Polycentricity	-1.89	-0.57	-0.95	0.26
Flight connections	0	75.06	0.39	3.14
International political networks	0	100	0.29	3.33
Tourism networks	0	100	4.97	13.72
Size hinterland 45min. (*100k)	0	124.36	19.95	25.23

**Table 4.3** – Descriptives for the variables used in the analysis

#### 4.3.2 Chapter 7: analysing different socio-economic configurations

This chapter explores the socio-economic distribution of population and its clustering into characteristic spatial patterns in three sets of European second-tier and primate urban regions: Porto-Lisbon, Bristol-London, and Antwerp-Brussels. This is done by analysing geodemographic data synthesised by the respective national statistical offices, or by aggregating existing indicators when such a synthesis could not be found. The analysis involves the comparison and identification of patterns from existing maps and their verification through a quantitative analysis of the relative presence of socio-economic typologies in the different parts of the urban regions<sup>29</sup>.

The definition of the second-tier urban regions part of the analysis is now framed by the overall selection criteria for the main case studies, as advanced in the introduction and presented in detail in chapter 5. As for the primate urban regions, they are the national capitals in direct relation with each main case study, arguably playing a politically and economically dominant role in their national contexts.

##### *Data sources and geographical detail*

In the case of Porto and Lisbon, the source of data is the report ‘Socio-economic typologies of the metropolitan area of Lisbon and Porto’ (original in Portuguese; my translation), published by the National Statistics Institute (INE, 2014) based on the 2011 census. The INE report starts by defining six socio-economic categories based on the variation and clustering of a set of main indicators and their sub-indicators, as extracted from the census: population age, density and type of urbanisation, commuting flows and modes, immigration and education. After applying a cluster analysis methodology to define the six socio-economic typologies, they are allocated according to their demographic predominance to the statistical sub-sections of the census and mapped according to their geographical distribution, making dominant groups emerge in

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<sup>29</sup> An earlier version of the analysis presented in this chapter, including the definition of its methodology, was initially published in a paper appearing in Portuguese language in a peer-reviewed journal: Cardoso, R. 2015. Cidades principais e secundárias na Europa: uma caracterização dos contrastes à escala da região urbana. [Primate and second-tier cities in Europe: characterising their contrasts at the urban region scale]. *GOT*, no. 7 (June), pp. 85-109, <dx.doi.org/10.17127/got/2015.7.004>.

particular locations. These groups can be associated with inner cities, suburbs, etc. The area of analysis corresponds to the ‘metropolitan areas’ of Porto and Lisbon as defined by the government in 2013<sup>30</sup>. In both cases, this area is smaller than the ‘urban region’ defined by ESPON 1.4.3 (2007) and BBSR (2011) and used elsewhere in the study.

The exact methodology of the Portuguese study is not available elsewhere, but a sufficiently similar model exists for the United Kingdom, namely the geodemographic classification based on the socio-economic typologies developed from the 2011 census by Chris Gale at UCL Geography, endorsed and adopted by the Office for National Statistics and mapped in detail by Gale and Oliver O’Brien as part of the Datashine/BODMAS project (UCL) for the whole of the UK. Like the INE report, this method aggregates the results of statistical indicators in typical categories and maps them according to their demographic predominance in the statistical subsection of the census. This classification (now called the 2011 Area Classification for Output Areas) includes eight ‘supergroups’ whose characteristics can be related to the Portuguese categories (ONS, 2014). Chapter 7 will discuss this in greater detail and present tables summarising the main features of the INE and ONS socio-economic typologies and identifying their best correspondences. The urban regions in this case are those defined by ESPON 1.4.3 (2007). Bristol includes the City of Bristol, Bath & NE Somerset, South Gloucestershire and North Somerset. London includes the London region and parts of East and South East regions<sup>31</sup>.

While the methodologies of the Portuguese and British datasets are quite compatible, it was not possible to find a similar geodemographic exercise for Belgium. Therefore, in order to compare Antwerp and Brussels, it was necessary to aggregate individual statistical indicators partially representing the socio-economic typologies defined by the other two studies. These indicators were produced by the Belgian national statistics office based on the 2011 census. However, they lack a detailed spatial component and are only available at the municipal scale, which makes them less precise

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<sup>30</sup> Details of the methodology, including factor and cluster analysis, correlations and allocation of the socio-economic typologies to statistical subsections can be found in INE, 2014. The analysis is applied strictly to the Lisbon Metropolitan Area (AML; pop. 2011 2,821,876) and the Porto Metropolitan Area (AMP; pop. 2011 1,759,524), as defined by Portuguese law no. 75/2013.

<sup>31</sup> See ESPON (2007) for a complete list of NUTS 3 units, FUAs and MUAs comprising both urban regions. However, note that the Datashine/BODMAS project maps the geodemography of the whole of the UK, so the maps used are not restricted by the ESPON-defined boundaries.



than the fine-grained maps depicting statistical subsections in Portugal and the United Kingdom. To mitigate this limitation, approximate maps were produced to visualise the data, either by mapping tool of the Belgian Census website or by the use of GIS.

Overall, this technique allows the spatialisation of socio-economic data across the territory of urban regions and the visualisation of the characteristic patterns that emerge in the different case studies. This will provide relevant answers to the questions whether there is a consistent pattern of contrasts between primate and second-tier urban regions and whether both types of urban region do follow a socio-economic configuration in line with the findings of other chapters and the hypotheses proposed in this study.

#### **4.3.3 Chapter 8: analysing the historical emergence of urban regions**

This chapter now turns to the individual analysis of the main cases studies and explores the history of urban region formation in Porto, Antwerp and Bristol. It checks whether they followed a similar development pattern which can help explain some of the characteristics uncovered so far. The analysis includes mapping the progression of urbanisation over the territory, measuring population change in the different parts of the urban region, and evaluating the role of the core city in that process.

To achieve these purposes, a diachronic analysis of the long-term progression of urbanisation based on population change (1890-2011) will be used. A view covering such a long period is important for two reasons: first, it helps to stress the argument that dispersed urbanisation and undirected, fragmented forms of urban expansion are not necessarily 'recent' processes of urban growth (i.e. pertaining to the second half of the twentieth century), particularly in urban regions lacking an overly dominant core city; by doing so, it helps illuminate cases of metropolitan growth which may not have moved along 'centrifugal', 'incorporation' and 'fusion' modes (Solis et al., 2015), but have rather experienced a dominant mode without having previously gone through others. Second, it can highlight place-specific processes that were in place long before the discipline of urban studies started to look outside core cities, and that arguably have an influence on local modes of urbanisation. Urban theory is recent but urbanised territories are ancient, and a long-term view helps to avoid 'travelling theory' (McNeill, 1999).

### *Data sources and geographical detail*

The study of the urban region scale has embedded difficulties of precision and data availability. The problem is how to look at long-term processes with the same level of precision as in core cities. Additionally, we need data that can be compared for the three case studies. Indicators normally used in comparisons of urban development, like land use or extension of built up fabric, only exist with sufficient accuracy since the 1950s (EEA, 2002; Kasanko et al., 2006). However, population data goes much farther back, to the times when national authorities started systematically gathering census data.

Using population to understand urban change has advantages and limitations. While absolute numbers say little about the problem, population *change* is seen as both an influence in and consequence of urban conditions: “*Migration is a response to differences in employment or the quality of life between places, even if the process of adjustment is inefficient.*” (Turok and Mykhnenko, 2007: 167). Further correlates between population change and the progression of urbanisation – as measured by the presence of urban functions, amenities or built-up space – are provided by Markusen and Schrock (2009) and Glaeser (2001). Population data also allows direct and accessible comparisons between different contexts. The main problem of such analyses, namely the arbitrary definition of spatial units (administrative areas), is mitigated by focusing on the smallest possible unit (LAU2): extreme variability of unit size and inaccuracies brought by density and settlement pattern variations inside larger units are thus kept under control. Naturally, more precise units used in contemporary measurements, such as 1 km<sup>2</sup> grids, are also not available for a long term analysis.

While in Porto and Antwerp LAU2 units remained rather stable throughout the years, the successive administrative boundary changes in the UK make the Bristol case less reliable. Nevertheless, an effort was made to access historical data for each parish/ward/local government district and to attribute the most extreme population changes to boundary changes rather than explosive urban growth. Despite that, a few values for Bristol are estimates: when the LAU2-equivalent data was truly inaccessible for a given area, the averages of the higher boundary were used.

Five census years with approximately 30-year intervals are used from 1890 to 2011. Data was gathered from a variety of sources: for Porto, all census documents are available online from the National Statistics Institute. Data exists at the lowest sub-municipal division (*freguesia*). In Bristol, data at ward level for 2011 is available from the Office for National Statistics, while the 1981 data was accessed through NOMIS, the official labour market database; older data was mainly gathered from the ‘A Vision of Britain’ database, run by the University of Portsmouth. Data for Antwerp exists only at the municipality level and was gathered as published online by municipalities and other sources remitting to the National Census data owned by the Belgian Statistics Institute.

The study areas are defined once more as ‘urban regions’, following the ESPON 1.4.3 report (2007) that delineates Functional and Morphological Urban Areas (FUAs and MUAs). The ESPON definition was chosen to keep consistency with the other chapters, but also due to (1) the access to population data at LAU2 level, kindly sent by the IGEAT team at Université Libre de Bruxelles; and (2) the fact that it considers the existence of several MUAs (morphological agglomerations) in any given FUA, unlike others, such as the recent EU-OECD definition (2012). Highlighting the presence of multiple MUAs rather than only the dominant one around the core city is arguably closer to the theoretical arguments of this thesis. The surface area, population, number of MUAs, number of LAU2 units and their average area are presented in Table 4.4.

Urban Region	No. of MUAs	Surface Area km <sup>2</sup>	Population (2011)	No. of LAU2 units	Average area km <sup>2</sup>
PORTO	5	2,468	1,964,944	352	7.01
ANTWERP	2	1,831	1,452,793	58 (49+9*)	31.57
BRISTOL	4	1,579	1,094,957	153	10.32

**Note \*:** The LAU2 unit corresponding to the municipality of Antwerp has a larger area than the other units and its boundaries were changed in 1983 by the annexation by the of several municipalities. Therefore, to keep the consistency of the analysis, population data in Antwerp was calculated and mapped individually for the city’s nine districts.

**Table 4.4** - Description of urban regions (ESPON, 2007) and number/average area of LAU2 units considered in the analysis.

#### 4.3.4 Chapter 9: Analysing the institutional conditions for integration

This chapter explores whether the influence of the distinctive features of second-tier urban regions uncovered so far in integration processes are acknowledged by the actual actors responsible for producing policies and strategies towards integration. Namely, the analysis looks at how these features have the potential to overcome the barriers to integration associated with both primate and polycentric urban regions and to contribute to the development of effective and durable partnership models between the various institutions of the urban regions. This will be done by a comparative account of the three main case studies, as this topic is likely to be greatly affected by place-specific conditions. The analysis is mainly based on qualitative data sources, including interviews with top-level officials in municipalities and the study of documents that help clarify the existing institutional, political and regulatory frameworks in each individual instance.

##### *Data sources and focus of analysis*

There are at least three ways to analyse models of institutional partnerships: looking at their *outcome*, by analysing changes and inferring causalities in whatever indicators are privileged by the research; assessing their *outputs*, by describing what projects and plans have actually been implemented; and evaluating the *perceptions* and *opinions* of the stakeholders themselves, to check for their own assessment of the ongoing processes and expectations about the outcomes and outputs of the model (Otgaar et al., 2008).

Considering that none of the three case studies has a formal metropolitan government in place and that all are undergoing important political and institutional changes regarding the type of and opportunity for inter-municipal partnerships, it is probably too soon to analyse the outcome of such strategies. The assessment of their concrete outputs does not tell us much about how the roles of actors are balanced and whether there is a mutually recognised ethos of collaboration. Indeed, the question here is more about the willingness of actors to engage in partnerships, namely whether the characteristics of second-tier urban regions may have a positive effect in that willingness. This is highly dependent on the perception by actors of the symmetry of power relations and the potential for joint gains and of the recognition of a shared metropolitan identity

around which the incentive for integration congregates (Nelles, 2013). This adds to the importance of a method based on evaluating perceptions and opinions. The obvious limitation is that they are subjective by definition, and risk expressing respondent bias.

The methodology proposed to obtain primary data relies on open-ended interviews with approximately nine key institutional actors in the three case study urban regions. The focus is on the municipalities integrating the urban region, represented by their mayors or councillors, as they are, in the absence of a larger scale of government, the main drivers of institutional integration strategies (Feiock, 2004). However, there is space to inquire on the potential of different models of integration – metropolitan government, merger of local authorities or inter-municipal collaboration. The interviews cover four key themes, argued by existing literature as potential barriers to integration in primate city or polycentric urban regions: the distance of political cultures between municipalities, their socio-economic homogeneity and symmetry of relations, the role of the leading city, and the existence of a strong ‘metropolitan idea’ gathering all actors.

The complexity of the task (including need for travel and busy schedules of the participants) recommends a relatively small sample size. The strategy considers municipal representatives from the core city and a minimum of two smaller centres (preferably one in the core MUA and one in the more remote FUA), due to the expectation of contrasting views about the research questions and to ensure that multiple perspectives are captured. Therefore, a total of nine interviews were sought (three per case study). The respondents are mostly top-level political officials (mayors or councillors), in some cases supported by the technical expertise of senior civil servants.. Prior knowledge of their political inclinations or mutual relations were not part of the selection criteria. In the end, seven interviews out of the nine intended were effectively conducted. The difficulties concerned Bristol, where only a councillor from the core city was available to speak. Mayors and councillors in the other local authorities justified lack of availability with busy schedules. To partly compensate for the missing perspectives, an analyst from the Centre for Cities was consulted about their recent research about city region formation and devolution in the West of England. The interviews are conducted face-to-face (in one case via Skype), audio recorded and fully transcribed. For the interview schedule used, refer to Appendix 1. The conversations are semi-structured

around the themes above and provide the opportunity to compare different perceptions of the territory and the relations between its components, uncover the sources of disagreement and explain how this influences the potential of integration strategies.

There is, of course, a potential for bias by the interviewer, who may make an intellectual 'preference' for urban region integration visible. To deal with that, an effort was made to remain non-judgemental and not provide cues for responses. But a potential respondent bias may also be present in this kind of sample: while the respondents were not chosen according to a previous knowledge of their preferences, they are informed of the nature of the research and receive a general overview of the findings so far. Therefore, an inclination towards integration strategies is expected, or at least an awareness of its potential benefits. The point of the interviews is not whether integration strategies are welcomed in the urban region, but whether the existing functional, spatial, socio-economic and political specificities are able to minimize the barriers to integration visible in other types of urban region. The true bias lies in the dishonest or incomplete answers by respondents, who could be interested in exploring political rivalries or exaggerate the role of their municipality for political gain. This can be minimized by triangulating the responses of all participants to a given topic and checking for inconsistencies. Note that, given the nature of the questions, the discrepancies between respondents in the different parts of the urban region are a valuable research finding in itself: the level of subjectivity is revelatory of the different perceptions that different territories will have about particular topics.

#### **4.4 Conclusions**

With this account of the research design and methodology, Part 1 of this thesis is now complete and the empirical work can start on a basis of well-defined research terms and methods. This chapter started by making explicit the design of the two main research questions, by explaining why they are formulated precisely in this way and why they have this precise focus. That section covered the reasons why the spatial and institutional features of second-tier urban regions are relevant to explain their integration processes, why the comparison with primate urban regions is especially urgent, and why the

chosen four aspects of analysis are important. The next section covered the main methodological options emerging from the theoretical framework, namely the option for variation-finding and individualising methods over universalising and encompassing comparisons. This has an influence on the research design, which is organised around a case study-based comparative framework but whose scope and analytic perspective is not static. The research is supported by an exploratory design structure of mixed methods, in which quantitative findings are deepened using qualitative methods, revealing first overall patterns and similarities and then their underlying and localised causes. This is translated into a structure that makes the comparative framework progress from more general to more specific findings, with the triple purpose of defining a wide region of variability of shared features in second-tier urban regions, highlighting their contrasts to primate urban regions, and grasping the place-specific peculiarities of each individual case. This progression is then matched to the four previously defined aspects of analysis, whose order of presentation and scope depend on their methodological appropriateness for the desired scale of comparison and the existence of available data. The need to triangulate the findings from several perspectives, to avoid assuming the isomorphism of different analytic aspects and providing misleading answers to the research question, is materialised by a structure of semi-autonomous chapters, each providing relevant findings on its own, but all contributing to the larger argument. Finally, the chapter ends with an account of the detailed sub-questions covered by each empirical chapter and the techniques used to address them.





- PART 2 -

## ANALYSING THE SECOND-TIER URBAN REGION

Empirical explorations of metropolisation in second-tier urban regions

## CHAPTER FIVE. Case Studies: Porto, Bristol and Antwerp

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The research questions emerging from the theoretical arguments and from the review of the existing literature will be applied to European second-tier urban regions. As discussed in the previous chapter, they are not universalising cases designed to prove that all instances follow the same rules, or illustrations of a larger system classifying second-tier cities everywhere. They are rather part of an explanatory sequential design, whose focus turns increasingly more detailed and specific as it shifts from the purpose of establishing a region of variability of second-tier urban region features to highlighting their contrasts with primate urban regions and finally to understanding the specificities of each case. While the first step of the analysis involves the comparison of a wide range of cases across Europe, the subsequent steps resort to an increasing concentration on three representative case studies, whose range of common characteristics and place-specific variations can provide relevant findings at all stages of the comparative research. Presenting these case studies is the purpose of this section.

We have seen that all second-tier cities are different and that, even within a set of shared features, some additional criteria are needed to select the appropriate cases for a detailed investigation. Definitions of second-tier cities change according to the chosen approach: by some interpretations, they are not even present in every country. Historical contingencies and national systems greatly affect the 'second-tier' status of a city and its incentive to pursue integration strategies. Then, when looking at the urban region scale, we have also argued that there is more than one route towards such large-scale spatial configurations and the appropriate cases for this analysis would lie between dominant core city and polycentric urban region models, a position which would give them an added interest and possibly an added ability to pursue forms of integration.

This chapter has three purposes. First, in section 5.1, review the previously determined selection criteria for second-tier cities and show how Porto, Bristol and Antwerp respond to them. Second, in section 5.2, present a comparative overview of the three cases summarising their historical and political role as second-tier cities, including the different strategies they followed to support their claim as solid alternatives to the

primate city model of development. Third, in section 5.3, conduct a preliminary analysis of size, functions and administrative structures that provides an indication whether these urban regions would potentially gain from deeper integration. The portraits of Porto, Bristol and Antwerp emerging from this review will justify their role as appropriate case studies for the remaining empirical chapters.

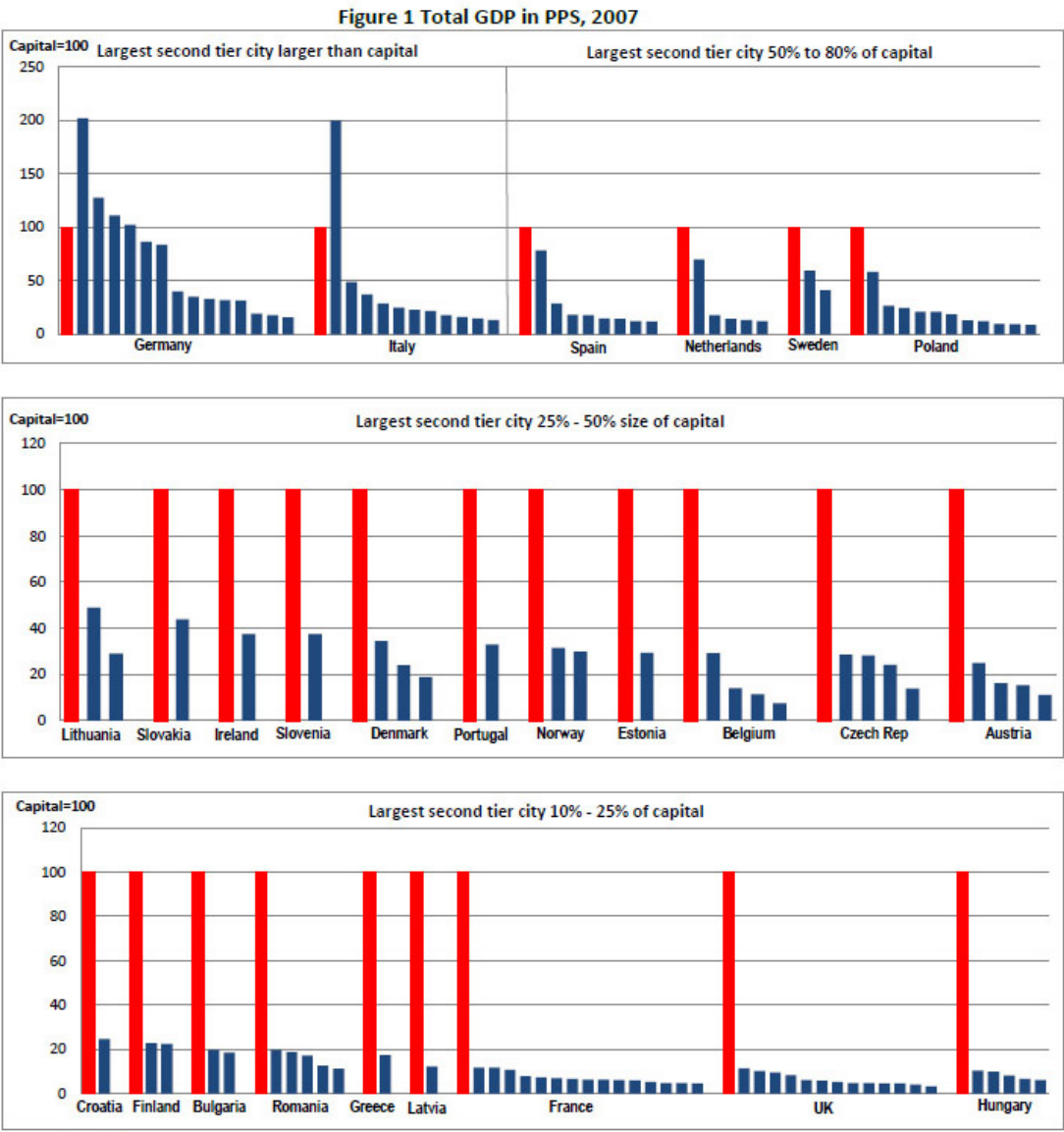
## 5.1 Process of selection

The two main criteria to select the case studies were already defined and explained: first, they should be second-tier cities, according to the political-administrative definition discussed in chapter 2, in a country clearly facing a dominant capital; second, they should be embedded in larger and densely urbanised regions, being their institutional or cultural core without being functionally and demographically hegemonic – i.e. neither dominant core cities nor a part of a ‘classic’ polycentric urban region. While the first criterion responds to the *motivation* of the research, the second reveals the case study’s *appropriateness* to the research theme.

The selection process started with the list of second-tier cities provided by the ESPON report (2012a), with the minor changes explained in section 4.3.1. This is the list of cities included in the first stage of the analysis, namely the study of urban functions in chapter 6. The first step to narrow down this list to three detailed case studies was to exclude all countries which do not have a clear second-tier city level (and conversely lack a dominant capital) or have ‘capital-like’ second-tier cities for historical or political reasons, as discussed at length in chapter 2. This initial sweep eliminated cities in Germany, Switzerland and The Netherlands (no dominant capital) and Italy and Spain (regionalised states with ‘pseudo-capital’ second cities – Milan and Barcelona).

To confirm this, the level of dominance of capitals compared to second-tier cities was assessed through economic data from the ESPON second tier cities report (2012a). Rank-size distributions were not used because population size is an ambiguous indicator when the study involves the ‘unbounded’ scale of urban regions. Figure 5.1 shows the total GDP in capitals and second-tier cities in 2007. In Portugal, Belgium or Denmark, the strongest second-tiers rank around one third of the capital. In the UK, Hungary or

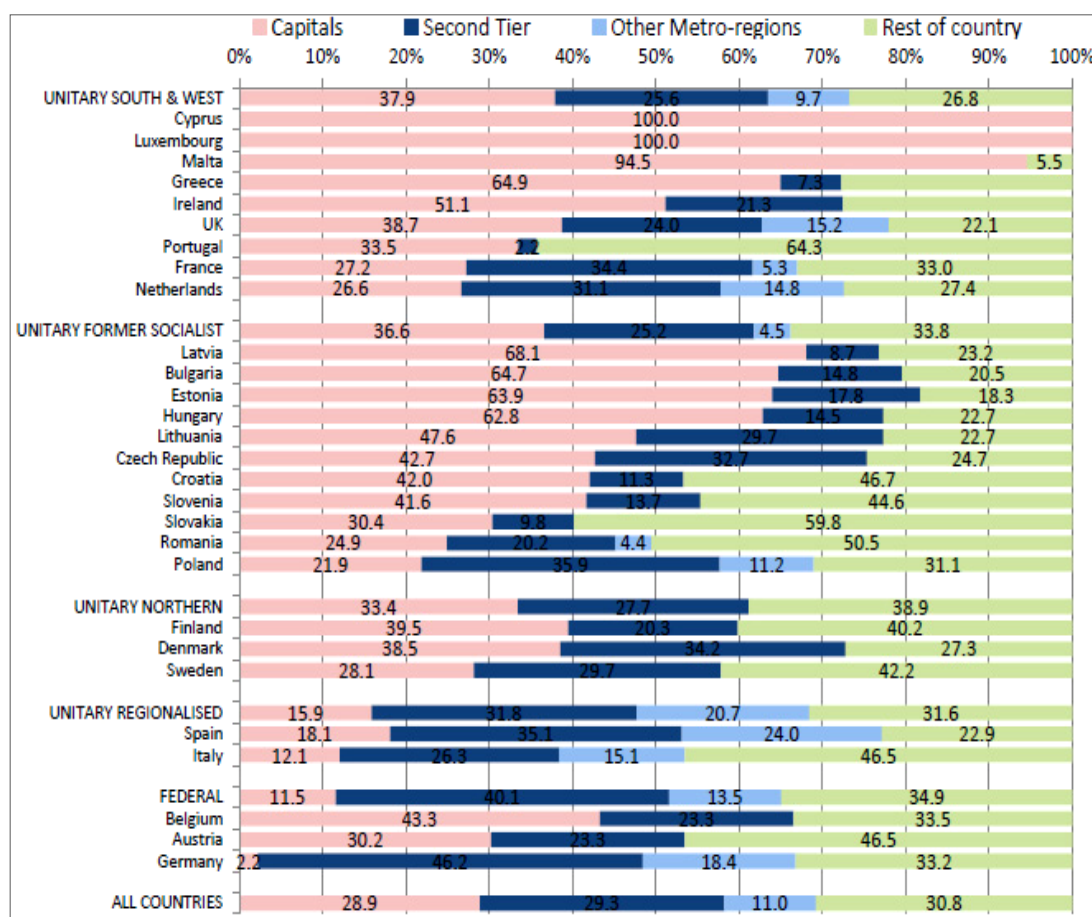
France the primacy of the capital is overwhelming – about 10 times greater than the nearest contender. Germany, Italy, Spain and the Netherlands lack this capital city dominance, thus justifying their exclusion and suggesting a connection between the political organisation of the nation-state and the economic fortunes of its cities.



**Figure 5.1** – Total GDP in PPS in capitals vs. second-tier cities in 2007, by country (capital = 100) (source: ESPON, 2012a: 28).

Figure 5.2 shows the share of economic growth attributed to capitals, second-tier cities and other regions, according to the national political structure. Unitary and eastern

European states tend to have greater capital city dominance, but not always. Capitals are less dominant in regionalised and federalised countries, with some exceptions. Notably, France, known for its hyper-concentration in Paris has a capital city share similar to the more ‘horizontal’ Netherlands; this does not mean that Paris is not a primate city (see figure 5.1 again) but highlights the sheer size of the country and the number of smaller alternative urban centres that, together, make up for an important part of its economic output. So capital city dominance should be clear in the both in 5.1 and 5.2, and this applies indeed to several cases. Not only does the capital have a much higher GDP than other cities (figure 5.1), it also brings a greater share of national growth than all second-tiers together: this is the case of Athens (64.9%), Dublin (51.1%), Brussels (43.3%), London (38.7%) and Lisbon (33.5%), among others.



**Figure 5.2** – Share of national economic growth brought by capitals, second-tiers and other regions, 2000-2007 (source: ESPON, 2012a: 28).

Nevertheless, and while it does not affect the validity of the selection criteria, it should be said that even in Germany, with several cities on a similar level to the capital, one ‘second-tier city’ (Frankfurt) ranks notably higher. In Italy, Milan ranks twice as high as Rome and four times as high as the next second-tier city. Therefore, countries with an allegedly more ‘balanced’ urban system (ESPON, 2012a) because they lack a hegemonic capital, may also suffer from a single city dominance that just happens not to be the political capital. There is a strong imbalance across European countries between the economic output of one or two cities and all others.

### *Narrowing down the list of candidates*

Expectations of proper fieldwork and the need to study local documents excluded cities in Eastern Europe due to pragmatic concerns of language and distance. A demographic criterion was also added: to stabilise the comparative framework, the final candidates should have a similar size, both at the scale of the main agglomeration and the functional urban region (ESPON, 2007; Eurostat, 2015). In other words, they should be broadly considered ‘mid-sized’ for European standards, rather than ‘large’ or ‘small’ cities: Christiaanse et al. (2009) focus on agglomerations near one million inhabitants “*as an essential cornerstone of European urban life and culture.*” (2009: 7). Second-tier cities are, by definition, the upper tier of this mid-sized layer – one million inhabitants seems to be a good lower boundary of the area in which European second-tier cities typically move and was used as a loose reference to narrow down the selection process. Cities like Cork or Toulon became too small, but others like Manchester or Lyon are clearly too big. This resulted in a list of 15 second-tier metropolitan areas of comparable size.

### *Next steps: assessing the urban region structure*

All remaining second-tier cities at this point are important core cities, clearly the most important urban agglomerations in their regions – none can be said to be part of a ‘Polycentric Urban Region’ of equally important centres. Their large scale urbanisation patterns remains to be seen. To address this, Eurostat and ESPON definitions were used, as they are the source of much cross-European comparative data.

A first indication of the type of desired pattern is a relatively high population ratio between core city and functional urban area<sup>32</sup>, showing that people are distributed throughout the urban region rather than concentrated in a dominant core. The first column in table 5.1 shows the CC/FUA ratio for the 15 second-tier metropolitan areas. Antwerp and Bristol are among the highest ratios (meaning high urbanisation levels beyond the core city), but Porto, strangely, lies at the lower half of the table. This is because Greater Porto – the continuous morphological unit beyond the core city – is used to make the comparison and this dense territory has merged to cover most of the functional urban region. If the actual core city boundaries were used, the ratio would rise to 1:5.48 and a bias would work in the opposite direction, as the city is administratively under-bounded. Another effect that can influence the results happens when a FUA has a distributed but comparatively small population density, meaning that a high CC/FUA ratio does not always mean strong urbanisation in or beyond the core city. This happens, for example, in Linz or Göteborg, where, despite the high ratio, both the core city and the FUA are comparatively less dense than other European urban areas.

Clearly, the CC/FUA ratio is helpful but not sufficient, considering the different morphologies of European agglomeration. Therefore, it needs to be conjugated with a relatively high population density at the metropolitan region scale<sup>33</sup> – people live, work and move within this region and high overall densities at this scale, rather than only in certain centres, indicate greater consolidation of urbanisation in the ‘extensive city’ (see the findings of the PLUREL project, discussed earlier). Porto, Antwerp and Bristol achieve significantly higher values than other cities (note how Göteborg now ranks last). Notably, many cases do not even reach the 300 inh./km<sup>2</sup> threshold at that scale (defined by Eurostat as the rural/urban division). This suggests that density is often diluted across a thinly populated functional urban area.

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<sup>32</sup> To ensure available data for all cases, core cities are defined according to Urban Audit’s ‘cities’ and ‘greater cities’ (Eurostat, 2011). Functional Urban Areas (FUAs) are defined according to ESPON 1.4.3 (2007).

<sup>33</sup> Data for all cases was only available for ‘metropolitan regions’ (Eurostat, 2015). They are defined as FUAs adjusted to NUTS3 boundaries and do not always correspond to ESPON FUAs.

Finally, urbanisation patterns were assessed by looking at the percentage of the population in the metropolitan region living in agglomerations over 250,000 inhabitants (Dijkstra, 2009). A high value here can suggest predominance of larger centres and concentration of more important urban functions. If it comes with a relatively high CC/FUA ratio, the existence of other dense cores in the region is confirmed<sup>34</sup>. This study aims to find ‘extensive cities’ sufficiently compact and equipped to enable metropolisation processes rather than a homogeneous and scattered distribution of people, even if at high densities. The final results are presented in the following table<sup>35</sup>:

CC/FUA ratio		pop. density metro		%pop. @>250k	
<i>City</i>		<i>City</i>	<i>pop/km<sup>2</sup></i>	<i>City</i>	<i>%</i>
Linz	1 : 4.82	Porto	1,566	Bristol	100
Cardiff	1 : 3.13	Antwerp	1,071	Glasgow	95
Antwerp	1 : 2.75	Bristol	823	Antwerp	97
Bristol	1 : 2.39	Cardiff	734	Newcastle	95
Gr. Nottingham	1 : 2.37	Glasgow	491	Toulouse	90
Glasgow	1 : 2.34	Nottingham	420	Nottingham	87
Nice	1 : 2.08	Marseille	392	Porto	87
Gr. Newcastle	1 : 1.91	Nice	252	Cardiff	80
Göteborg	1 : 1.84	Strasbourg	233	Marseille	73
Gr. Porto	1 : 1.83	Newcastle	213	Bordeaux	73
Marseille	1 : 1.46	Toulouse	207	Nantes	62
Strasbourg	1 : 1.28	Nantes	196	Strasbourg	60
Bordeaux	1 : 1.26	Linz	176	Göteborg	54
Nantes	1 : 1.17	Bordeaux	151	Nice	50
Toulouse	1 : 1.15	Göteborg	67	Linz	---

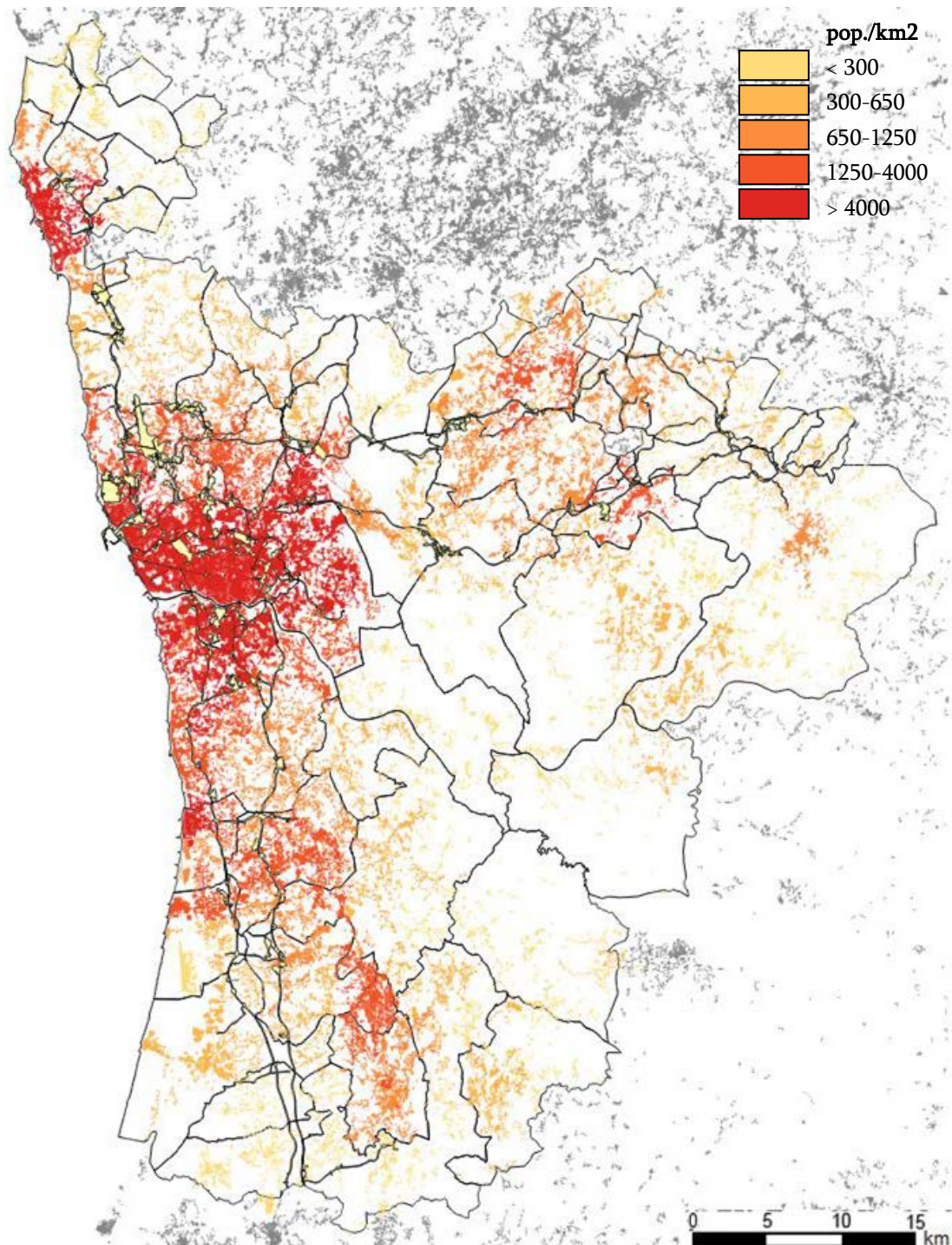
**Table 5.1** – CC/FUA population ratio, population density of metro region (Eurostat, 2015) and percentage of population in agglomerations over 250,000 inhabitants (Dijkstra, 2009)

<sup>34</sup> Disaggregated data was not available for this indicator, which makes the boundaries of the >250,000 agglomerations difficult to understand. For example the Eurostat definition for the Bristol metropolitan region (pop. 1,090k) includes the city of Bath (pop. 85k) but the region is considered as having 100% of the population in agglomerations over 250,000 inhabitants. This means that Bath (and other smaller centres in the region) must be somehow aggregated as a larger entity. Therefore, this particular indicator should be considered with some skepticism.

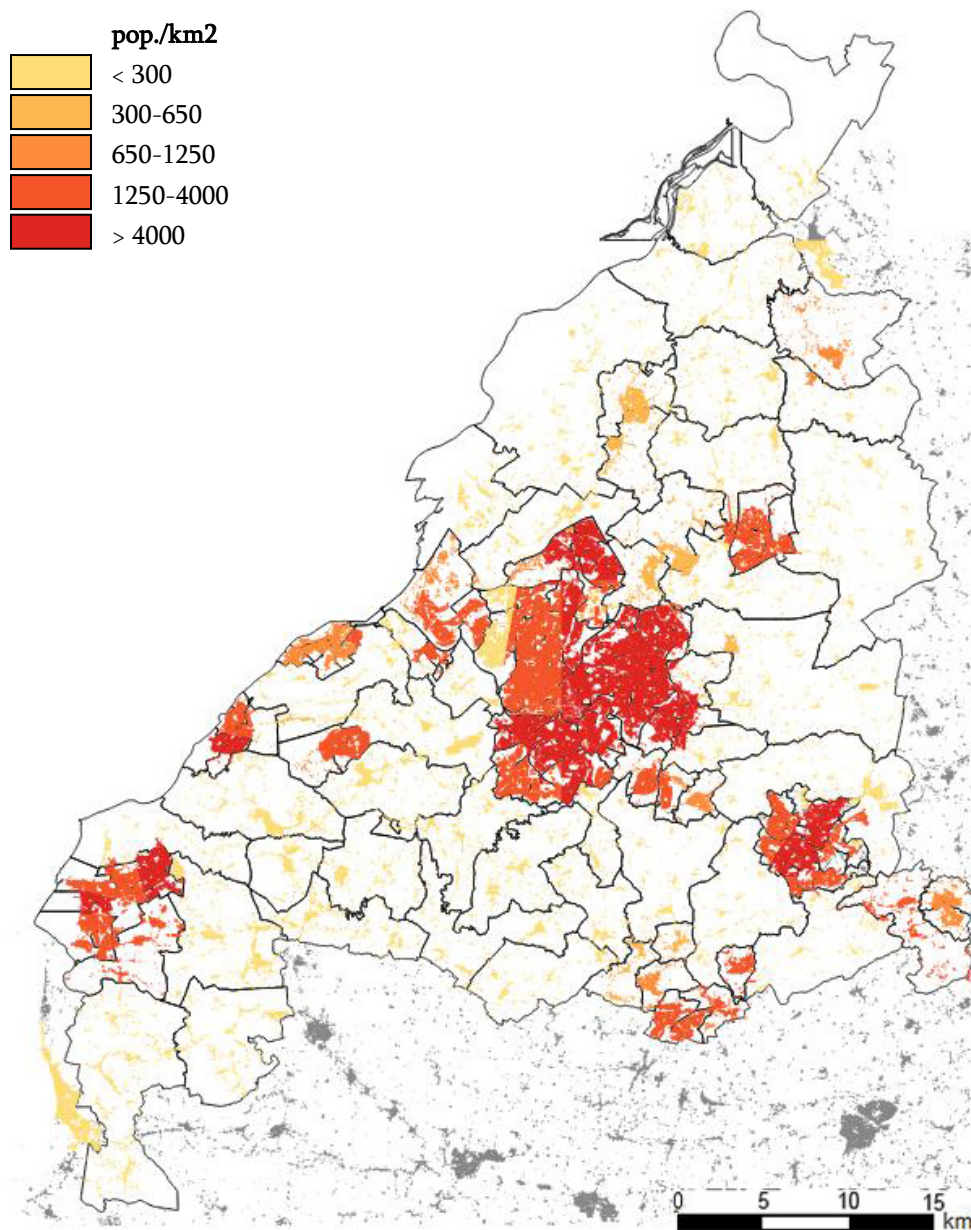
<sup>35</sup> Note that all these second-tier cities, and others part of the ESPON list (2012a), are still included in the broader analysis of urban functions in chapter 6.



A more precise notion of the diffuse and polycentric urbanisation patterns in Porto, Bristol and Antwerp can be provided by the following maps:

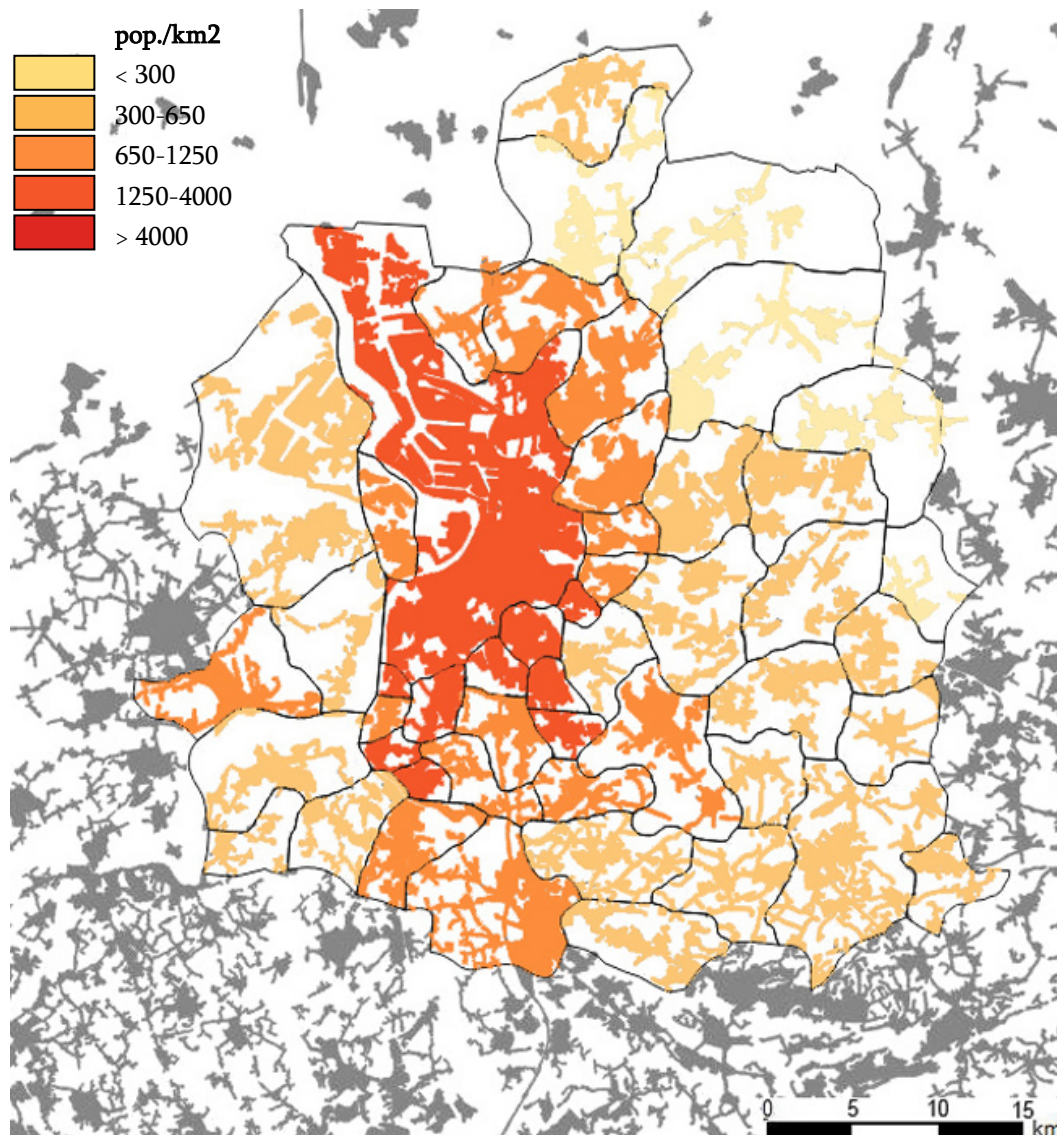


**Figure 5.3** – Porto urban region: population density projected over the built-up fabric shows a fragmented and diffuse settlement pattern with several dense urban centres connected by a 'gradient' of extensive low-density areas (source: 2011 national census data over COS 2007 official national land cover maps, DGT 2010).



**Figure 5.4** – Bristol urban region: population density projected over the built-up fabric shows a more contained but morphologically very polycentric urban structure with several compact cores in close proximity (source: national statistical data over EDINA Digimap Ordnance Survey Service, 2013 <http://digimap.edina.ac.uk>. © Crown Copyright and Landmark Information Group Limited (2015). All rights reserved. (2013).





**Figure 5.5** – Antwerp urban region: population density projected over the built-up fabric shows a nearly continuous urban coverage across and outside the ESPON-defined urban region, with different densities organised around the Antwerp core agglomeration (source: 2011 national census data over 2006 Corine Land Cover maps, EEA 2013).

### *Concluding the selection*

In summary, Porto, Bristol and Antwerp are clearly national second-tier cities in countries with a dominant capital, in historic, demographic and economic terms. And preliminary indicators and maps at the urban region scale suggest a polycentric and/or dispersed urban structure, yet high densities and general urbanisation across the region beyond individual centres. Other urban regions could also be selected under these

criteria, however, historical similarities concerning the socio-cultural profile of Porto, Bristol and Antwerp as typical 'second' cities, as defined by Hodos, Hohenberg and others bring an added interest to the final selection<sup>36</sup>.

They are ancient cities, important at least since the Early Modern period, when their economy was largely based on international trade and port activities. Therefore, their development paths were extrovert, not confined to the self-reinforcing political and economic power duality of primate cities (Jacobs, 1985; Hohenberg, 2004; Hall, 2006), but rather expanding into "*new, more hard-nosed directions*" (Hall, 1998: 9). As a result, their history shows some detachment from national constraints and greater permeability to international influences. Antwerp, whose history long predates the modern nation-state, experienced several periods of glory and decline related to its role as a privileged 'free merchants' city, on the one hand, and the negative impacts of annexations by surrounding powers, on the other. Bristol in the 18<sup>th</sup> century was the second largest port in England after London, directly trading with Europe and the Americas – including a prominent role in slave trade. Porto has a history of cultural and economic opposition to Lisbon, well illustrated by the medieval prohibition of nobility to spend more than three successive days or hold property in the city (Silva, 2011); or the nineteenth century emergence a commercial and financial bourgeoisie claiming its work ethics, productivity and entrepreneurial spirit, against the more courtly attitude of ruling classes in Lisbon (Lopes, 1999). In different ways and measures throughout their history, Porto, Bristol and Antwerp have been second-tier cities of both national importance and international, cosmopolitan reach.

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<sup>36</sup> The added interest also comes from their mutual relation throughout history. Maritime trade relations between the three cities – or more generally between Portugal, England and Flanders – were in place since at least the 15th century and were greatly enhanced in the 16th century. Although the political bias towards the 'imperial' port of Lisbon was already visible then, the Portuguese Crown invested in strong links from Porto to Northern Europe, where Antwerp had a prominent role as the main port of entry of Portuguese trade from the Atlantic colonies. Trade routes linked Lisbon and Porto to the ports of London and Bristol, Antwerp and Rotterdam, Nantes and Rouen, in such a way that Porto was seen as "*the southernmost city of Northern Europe*." (Barros, 2005: 10).

## 5.2 Three second-tier urban regions in overview

This section presents a brief historical overview of the ways Porto, Bristol and Antwerp have constructed their 'second-tier city' identity as an alternative either to the capital or to other national second-tier cities, following both 'material' and the 'symbolic' strategies as proposed by Hodos (2011) but often aiming for more modest outcomes than full integration in global networks (ibid.).

### 5.2.1 Porto, Bristol and Antwerp as second-tier cities

#### *Porto, Portugal's only second-tier city*

Established as an outpost of the Roman Empire, whose Latin name was *Portus Cale*, the city of Porto provides the origin of the name of the country. The core city itself, historically bounded by a ring road, is a relatively small municipality with less than 250,000 inhabitants, but it builds a compact agglomeration with its neighbouring municipalities, extending into a more relevant entity called Greater Porto, with 1.3 million inhabitants and a population density of 1,257 per km<sup>2</sup>. This is one of the two NUTS 3 regions constituting the Porto Greater Metropolitan Area, the other being the industrialised and dispersed region of Entre Douro e Vouga, to the south. This area is in turn embedded in the much larger urbanised region of Northwest Portugal, a diffuse and polycentric territory containing around 3.3 million people. It follows the national tendency for population loss, with projections for 2030 estimating a 4.8% decrease in Greater Porto, and losses of 1.2% and 2.7% in surrounding NUTS regions (INE, 2005).

Despite the strong morphological and functional linkages across the region, it lacks an administrative level fine-tuned with that scale. The Portuguese government introduced the concept of Greater Metropolitan Areas (for Lisbon and Porto) and inter-municipal communities (for other regions), but these are associations of municipalities rather than entities with real political or planning powers. Their competences involve creating critical mass to capture EU regional funds and articulating their activities in areas such as transport, natural resources or waste management. Their plans do not constrain in any way the individual planning powers of the municipalities, and the resulting power void creates little opportunity for meaningful institutional cooperation.

In many aspects, Porto is a typical second-tier city facing a dominant capital. Portugal lacks a regional government layer and is therefore very dependent on the central state, which may have enhanced the capital city bias visible in the long-term economic growth trend of Lisbon compared to the rest of the country, but even clearer in the functional imbalance between the capital and Porto (Ferrão, 2000). In fact, historically, Porto has been consistently losing economic and institutional weight and urban functions to Lisbon, mainly banks and firm headquarters founded in the more entrepreneurial North that migrate to enjoy the proximity to political power. However, an uncommon feature for a second-tier city is that the wider functional region of Porto – namely the area defined by the BBSR model of metropolitan areas (Göddecke-Stellmann et al., 2011) – is actually more populated than Lisbon, making the country demographically bipolar but functionally primate (Ferrão, op.cit.).

Despite the recent media hype brought by tourism and low-cost flights, the city has experienced some of the weakest economic growth rates of EU cities<sup>37</sup>, but it still does better than the radically impoverished and depopulated region of Northern Portugal, now the poorest region in Portugal in terms of GDP per capita but, as a whole, still the country's biggest exporter<sup>38</sup>. In this context, and also due to its historical role as the only second-tier city in the country, Porto is seen by some local powers as aiming for regional hegemony and thereby emulating Lisbon's 'flaws' at a smaller scale. When Porto, Matosinhos and Gaia, the most populated municipalities, created in 2013 the 'Atlantic Front', an informal collaborative platform that hints to a future municipal fusion, they were severely criticised by the mayors of the other metropolitan municipalities, who saw this as a "*divisive movement typical of the worst portocentrism*." (Mendes, 2013).

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<sup>37</sup> See ESPON (2012a). Notably, the 2007 data used does not yet consider potential economic gains from the city's recent accessibility by air. On the other hand it also does not acknowledge the effects of the more recent austerity measures in Portugal.

<sup>38</sup> See Monteiro (2013): GDP per capita in the Northern Region is 67% of EU27 average, compared to 108% in the Lisbon region. In any case, Greater Porto still manages to be 26% above its region.

### *Bristol, at the top of English Core Cities*

The Bristol urban region includes the City of Bristol, Bath and Northeast Somerset, North Somerset and South Gloucestershire. It was historically punctuated by many small towns, very much like the regions of Porto and Antwerp, rather than having a single dominant city in a relatively empty rural territory. The description of the region by Daniel Defoe in the early eighteenth century – “*full of rivers and towns and infinitely populous [...] interspersed with a great number of villages, I had almost said innumerable villages, hamlets and scattered houses [...]*” (quoted in Barry, 2000: 81) is strikingly similar to the description of the ‘continuous city’ in Northwest Portugal by Silveira in 1789, used earlier to introduce section 3.1.

Bristol is the regional capital of the South West and one of the eight English Core Cities; and quite a successful one, considering that “*the overcentralisation of the United Kingdom has created functional monopolies in London unlike anything to be found in any of our competing economies.*” (Heseltine, 2013: 8). The update of evidence from the State of the English Cities report (DCLG, 2011) shows that most core cities have achieved above average job growth, although they struggle to rise above national average in GDP per capita, but Bristol outperforms its rivals in most economic indicators. Indeed, Bristol is usually at one end of the spectrum of economic fortunes, while core cities in the North broadly tend to be on the other, especially since the 2008 financial crisis (Centre for Cities, 2013). The city has a strong position in knowledge-intensive economic activities, such as creative and aerospace industries, and a highly educated workforce. Bristol is also the highest-ranked core city (47<sup>th</sup>) in the UK Competitiveness Index (Huggins and Thompson, 2013)<sup>39</sup>. Unsurprisingly, London and the South East occupy 27 of the first 30 positions of the 2013 ranking, with nine London boroughs in the first nine positions. Population projections follow the trend in Southern England, with a growth of 18% estimated for 2012-32 in the city and 10-20% elsewhere in the region (ONS, 2014).

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<sup>39</sup> Some imbalances are visible at the urban region scale though, and numbers show that while more urban areas like the City of Bristol and Bath and NE Somerset have improved their position since 2010, competitiveness in North Somerset and South Gloucestershire has dropped sharply. Similarly, the DCLG 2011 report shows that in Bristol, Leeds and Newcastle the core urban areas have been key drivers of job growth, while in Liverpool, Manchester, Sheffield and Nottingham the larger Travel to Work Areas have managed to keep up with the core city.

Compared to the relatively stable planning frameworks in Portugal, the English system is changing in 2014-2015, after the government dismantled the regional planning apparatus, allegedly in the name of decentralisation, simplification and ‘removing the negatives’, and enabled the first wave of City Deals - bespoke, negotiated agreements for specific city-regions, mainly directed at economic growth<sup>40</sup>. In the case of Bristol, the deal includes the four local authorities mentioned above. This is the latest of several experiences in devolution, and have been generally welcomed by the English ‘second-tier’ cities, organised as the Core Cities group, based precisely on the notion that “*capital cities are different in many respects from non-capital cities.*” (Parkinson et al., 2004: 10). City Deals give local authorities more powers to propose investments, collaborate with local businesses and direct funding streams, but it is not clear yet whether the competitive character of the policy will “*simply reward those with the largest risk appetites rather than even-handedly supporting growth*” (Waite et al., 2013: 776).

#### *Antwerp, a story beyond the nation state*

The historic city of Antwerp lies in a relatively recent nation state, whose territory is often described as “*the dullest, most trivial and generic of Europe*” (Grosjean, 2010: 13) – a tampon state between stronger powers, lacking a specific identity and covered by dispersed urbanisation structured by a network of small towns “*where an intense poetry lurks side by side with a nauseating banality.*” (Meulder et al., 1999: 79). However, Belgium also encloses some of the earliest and more prosperous urban territories in Europe, namely the Flanders region and Antwerp in particular. In fact, language differences are not the only barriers between Flanders and the French-speaking Walloon region in the South. Also their urban histories left behind very different urban systems: Flanders, a densely occupied “*Christallerian network*” (Vandermotten et al., 2006: 146) of differently sized cities emerging from early and intense trade activities; and Wallonia, a more sparsely populated region whose urban development emerged mainly during 19<sup>th</sup> century industrialisation, concentrated near industrial and coal mining sites.

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<sup>40</sup> Hall (2013a) shows that beyond the so-called ‘North-South divide’ in the UK there are also profound economic contrasts between “*the Great Cities versus the Rest.*” (2013a:10).



Antwerp was a large and prosperous port city centuries before the creation of the Belgian nation-state, which led to the gradual dominance of Brussels, closely following Hall's argument (2006) that capital cities sometimes grow by contingency and political decision rather than their own economic and cultural merits. In this context, Antwerp's position as a self-standing second-tier city like Porto or Bristol is ambiguous, as it lies rather close to Brussels and is sometimes considered part of the larger polycentric urban region of Brussels, Ghent, Antwerp and Leuven – the 'Flemish Diamond' (Albrechts, 1998; Albrechts and Lievois, 2004). However, other studies (GEMACA, 2006; ESPON, 2007), mostly based on commuting data, prefer to consider separate functional areas for Brussels and Antwerp, despite their blurred limits. The main cities considered in the ESPON definition of the urban region are Antwerp and Mechelen. Population projections for 2011-31 estimate a growth of about 11% in the area (StatBel, 2013).

What stands out in any definition of the national urban system, despite the extensive powers attributed to regions, is the dominant role of the 'capital of Europe' Brussels (which is itself an autonomous region). Hall and Pain write that "*Central Belgium may appear physically quite polycentric but in functional terms is not polycentric at all*" (2006: 52): the data in their study reveals the primacy of Brussels in population, employment, and presence of advanced producer services (see also ESPON, 2012a). The fact that Brussels is a late, politically envisioned capital city, whose population in the early 19<sup>th</sup> century was comparable to Antwerp or Ghent, illustrates the growth mechanisms provided by the 'capital city bias' argued by Jacobs (1985), Hohenberg (2004), Hall (2006) and Crouch and Le Galès (2012). Even with the regional and linguistic autonomy, Antwerp is not the 'capital' of Flanders, like Barcelona is clearly the 'capital' of Catalonia: "*Indeed, Flanders considers Brussels as its capital: a historically Flemish city, even if outside the region's boundaries and with a majority of French-speaking inhabitants*" (Vandermotten et al., 2006: 151).

Spatial planning in Belgium starts at the scale of the regions. Through the *Ruimtelijk Structuurplan Vlaanderen* (Spatial Structure Plan for Flanders), established in 1997 and object of several revisions, the region enjoys full planning autonomy and defines its broad strategic objectives, including transport, ecological networks, economic growth nodes, and the 'branding' of the Flemish Diamond concept (Vandermotten et al.,

op cit.). The plan is strongly based on subsidiarity – regional to provincial to municipal – and different responsibilities are allocated on a hierarchical basis to the three tiers, which have to produce ‘structural plans’ for their territories (Scheers, 2006). However, no political entity of metropolitan governance works transversally across these three scales and the system has been criticised for failing to mitigate the lack of cooperation and rivalry of municipalities and linguistic communities (Tomaney and Colomb, 2014).

### 5.2.2 Second-tier city strategies

Hodos (2011) suggests two fundamental ways in which second-tier cities build their own identity in contrast to capitals: a symbolic path based on promoting large-scale and high profile events, and a material path, supported by investment in transport infrastructure to improve accessibility. As discussed earlier, both are aimed at the integration of second-tier cities in global networks as well as constructing a narrative which compares them favourably with capitals or other second tiers. But they are also strategies designed for times of economic prosperity that not all second-tier cities can afford.

In different ways, Porto, Bristol and Antwerp have adopted strategies of this kind. We will see how the material path has involved the urban region scale, while the symbolic path is still very much associated with the identity of the core city. But how they did it is very dependent on historical circumstances and national constraints. At least for our three case studies, the available budget for cities and urban regions, the amount of external investment they can capture, the organisational structure that allows them to create governance frameworks, all depend on national economic conditions and fiscal and administrative policies determined elsewhere. This directly interrogates Hodos’ central argument that the cities’ own agency is more important than exogenous forces operating above their scale and that “*cities are states in their own right*” (Hodos, 2011: 17). While he is right to point out that globalisation is not an untouchable macro-level structure but a process actively shaped and pursued by groups (of people, firms, institutions) that happen to congregate at cities, he gives comparatively little weight to the conditions (and often explicit barriers – see Crouch and Le Galès, 2012) imposed by entities – regional or national powers – operating between both scales.

An illustration of this comes from Porto, where the tools to develop visibility and connectivity have to deal with the issue of ‘double periphery’: being politically distant from the centres of decision-making in Lisbon, in a country geographically distant from the important centres of Europe. Addressing this has not been easy: in 2007, Vigo, in Galicia, lost the secretariat of the Spanish-Portuguese Cross-border Cooperation Unit to Badajoz, in Extremadura, “*in part due to the Portuguese government’s interest in discouraging any autonomic eagerness around Porto*”(Varela, 2007).

### *The symbolic path*

Known for its oppositional stance towards the capital, Porto is perhaps the clearest case of implementation of explicit second city strategies in the sense argued by Hodos. Recent manifestations of the symbolic path include events such as the European Capital of Culture (2001), the establishment of high-level cultural institutions such as Serralves and Casa da Música, by the renowned ‘starchitect’ Rem Koolhaas, and the 2013 municipal elections in which, for the first time in the country and with little precedent in Europe, a locally well-known independent candidate was elected mayor, urged to run by business associations and personalities of the city and openly stating his distance from political parties and the centralist “*old political oligarchy*”(Minder, 2013).

The prominent position of the local football club FC Porto also influences the ‘second city’ approach. Their consistent dominance of the national competitions (with occasional European and global success) in the last decades has often been equated to the shift to democracy in Portugal, levelling the field for all teams and rewarding merit, unlike the former regime that allegedly favoured the clubs of the capital. True or not, this shows a striking parallel to the discourse of the entrepreneurial bourgeoisie in the 19<sup>th</sup> century and their claim of moral superiority against the courtly, state-dependent classes in Lisbon (Lopes, 1999). The same logic appears in the descriptions of busy urban economies vs. subsidising the ruling elites in ‘inert’ capitals (Jacobs, 1985), governments based on pragmatic interests vs. prominence of ‘blood and tradition’ (King, 2010), or cities ‘earning their living the hard way’ vs. politically forged capitals (Hall, 1998).

Strategies in Bristol have been less focused on confronting the capital city for three main reasons. First, there are several competing second-tier cities in England so the Portuguese sense of imbalance between potential two-city bipolarity and effective single-city primacy does not apply; with the possible exception of Manchester (a sweep of recent generalist media will show this), their mode of operation has been more about exploring mutual rivalries than comparing to London in any way. Second, London is in so many ways detached from the rest of the country that it is often portrayed as a nascent ‘city state’ with a virtually untouchable position at the top of the urban hierarchy (or simply beyond that hierarchy). Third, London could hardly be seen as an ‘inert’, politically favoured city, dominated by courtly elites – the city has congregated the dominant classes but also innovation and the economic powerhouses of the country.

However, London also remains “*the UK’s most empowered urban government.*” (Foresight, 2014: 5), which may be an argument for other cities to strive for more powers at the metropolitan and local scales. This happened in Bristol, the only large city consulted at the 2012 mayoral referendum to vote ‘Yes’ for a directly elected mayor – i.e. a ‘personality’ rather than a team of councillors. Similarities to the ‘second city spirit’ proposed by Hodos and visible in Porto start here, as Bristol has also elected an independent with a message of “*doing things differently*” (Byrne, 2014) who “*fits Bristol’s sense of exceptionalism.*” (ibid.). The high-profile cultural events in the city, such as The Festival of Ideas and the 2015 European Green Capital, are based on this sense of being different, more creative and dynamic, feeding a narrative of second-tier cities as more forward-looking and detached from constraints than the older, heavier primate cities, stuck with the ballast of national centrality and symbolism.

The case of Antwerp is more ambiguous. The city equally follows the symbolic path described by Hodos, in the sense of high-profile events and narratives about its unique characteristics. Antwerp (called ‘the metropolis’ by its residents) was an early European Capital of Culture (1993), an event designed to turn the perception of a conservative, provincial city into a “*daring city that is not afraid of being international*” (Antonis, 2009: 21); it brands its unique role as the fashion capital of Europe and invested heavily in top-level museums and urban regeneration, namely in port areas.

However, in Antwerp this is not a reaction to a demographically similar, but unfairly privileged capital city, as in Porto, or a strategy to stand out from other second-tiers, as in Bristol. Antwerp's symbolic path rather reveals the memory of its role as a self-standing, world-class city centuries before the Belgian national state was created. It did not have to affirm its prominence over Brussels, which was not a particularly relevant city until the nineteenth century. On the other hand, the strange shape of regionalism in Belgium seems to have eluded Antwerp's aspirations of recovering its status: alongside its economic and functional dominance, Brussels is actually the capital of Flanders, which makes the latter a very rare case of an autonomous region whose capital formally lies in another autonomous region. While history makes Antwerp less of a 'second-tier city' in the sense of Porto and Bristol, this quite odd configuration strengthens its secondary role, even within its own surrounding region.

### *The material path*

While national and local economic fortunes have not produced a particularly rich history of transport infrastructure in Porto, contemporary developments have enhanced the international connectivity of the region, following Hodos' 'material path' strategy. The recent airport expansion and cruise terminal at the industrial port in Matosinhos have enhanced the region's centrality, mainly for tourism flows, and both are seen as infrastructures of regional importance. A good illustration of the role of the airport for the affirmation of the 'second city' (or 'second region') comes from the recent privatisation of ANA, the national airport authority, bought in 2013 by Vinci Airports International. This was highly contested by the Greater Porto municipalities and civil society, which saw an added risk of centralist management with no regard for the region's specificities and growth perspectives. The argument was that, run by a private foreign company together with all other Portuguese airports, Porto Airport could well be treated as a satellite of Lisbon rather than a major node for Northwest Iberia<sup>41</sup>. Several alternatives to manage the infrastructure and keep it under regional control were

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<sup>41</sup> Strikingly, Hodos refers to airports as a typical priority of second tier cities, writing that "*the expansion of Manchester Airport in recent years is intimately connected to the city's drive [...] to be recognized as 'capital of the North'.*" (Hodos, op.cit.: 143).

proposed and the most praised option was a public-private partnership between regional public institutions and large private firms headquartered in Greater Porto. The efforts were unsuccessful but the quick consensus developed around the importance of the airport was one of the few examples of visible regional identity and institutional cooperation in Northwest Portugal. Growing from 3.4 million to 6.9 million passengers per year between 2006 and 2014, the airport is consistently ranked as one of Europe's best and turned Porto into an important base for low-cost companies, with impacts on competition with other Iberian airports (Porto's catchment area includes most of Northern Spain) and economic diversification ranging from tourism to higher education. Over 42% of the tourists staying overnight in Northern Portugal in 2013 were foreign and their number increased by 55% between 2006 and 2013 (Turismo de Portugal, 2015); and the number of foreign students at the University of Porto practically doubled between 2010 and 2015 (Universidade do Porto, 2015).

The material path was very important in Bristol's history. The major initiatives undertaken, namely the design of the Great Western Railway to outperform Liverpool's links to London, the expansion of the port and the development of transatlantic steamships in the 19<sup>th</sup> century, served "*three simultaneous purposes: to achieve deeper global economic integration, to facilitate their success in intercity competition, and to catalyze local economic diversification.*" (Hodos, 2011: 125). They were part of the identity of the city and one of the factors that illustrated its 'sense of exceptionalism'. More recent events follow other priorities which do not seem to make justice to this typically 'second city' strategy. Unlike the Porto infrastructure (and other English core cities that see the airport as a fundamental asset for the region's success and identity), Bristol airport is not at the core of the regional accessibility and internationalisation strategy. Rather than global integration, the major cross-boundary transport investments over the next years mainly cover improved connections across the city-region, and quicker links to London. The West of England Local Enterprise Partnership has secured funding for investment in five major bus and rail schemes (West of England LEP, 2014) to improve intra-regional transport. By contrast, Hodos explicitly mentions Manchester Airport as a core source of regional pride and competitiveness and a major regional employer. He writes about the city's early pressure to have it designated as a major

national airport, along with Heathrow and Gatwick, and its public ownership model by the city of Manchester and surrounding municipalities: “*Manchester’s approach is truly an aggressive, mercantilist form of state enterprise conducted on behalf of local government.*” (Hodos, 2011: 142).

The core infrastructural project contributing to Antwerp’s ‘material path’ to global integration is certainly the port. The Port of Antwerp has been the source of economic activity for the city since medieval times, and the ‘Golden Age’ of Antwerp in the sixteenth century was based on mercantile and port activity. It is interesting to note how the alternate periods of success and decay have been closely related to the fortunes of the port. The dark period that started in 1585, when the city was in Spanish hands, was based on the blockade of the River Scheldt preventing the access of ships to the North Sea. This targeted infrastructural intervention changed the city “*from a commercial world centre to an inland port for two centuries*” (Port of Antwerp, 2015), affecting the whole social and economic life and showing how dependent Antwerp was on this particular site for global integration, inter-city competitiveness and economic diversification (Hodos, 2011). Today, the municipally-owned port is booming again (the second largest in Europe after Rotterdam, with headquarters designed by ‘starchitect’ Zaha Hadid on the way) but the economy is obviously more diversified and infrastructure has been updated. There is no relevant airport given the proximity of Brussels Zaventem, but the recent investments in Antwerp Central Station, since 2007 allowing high-speed trains to pass through rather than being a terminus, and thus gaining direct connections to Amsterdam, Rotterdam, Paris and Lille, is a significant manifestation of the ‘material path’ towards identity-building and global integration of second-tier cities.

### **5.3 The prospects of metropolisation: preliminary arguments**

We now turn to the urban region scale to answer, in a preliminary form, a simple question: would these three case studies have anything to gain from considering that scale as an extensive city? In other words, can an argument in favour of metropolisation be made for the three second-tier urban regions? Further integration at the urban region scale is not necessarily a policy priority in all cases. If an argument for such a strategy can

be made for Porto, Bristol and Antwerp, some basic conditions should be met. While the three urban regions clearly meet the main selection criteria previously defined, a complete justification of their utility as research objects needs a more precise analysis of whether they would in principle gain from pursuing deeper integration. The full assessment of this hypothesis, initially proposed in the introduction, is the task of the empirical chapters that follow, but we can try to find basic indicators suggesting that direction. The discussion so far argued that second-tier urban regions may have a greater incentive to pursue integration because:

- They would achieve a significant increase in size when compared with the present dimensions of the core city or agglomeration.
- They would capture a wider range of urban functions and increase their overall functional performance relative to primate cities and European average.
- Their institutional fragmentation restricts their ability to act as a strong political actor and integration would give them greater political voice.
- The current economic climate restricts investments outside primate cities and the addition of new assets to second-tier cities; cooperation with other authorities expands the pool of available complementary assets and allows their efficient use.

It is difficult to be conclusive about the last argument without a detailed investigation of the specific contexts. For now, it suffices to resort to the findings by Parkinson et al. (2015: 1060), who write that in the initial recession years (2008-2010), second-tier cities in Europe decline much more in terms of GDP per capita than capitals. Overall in Western Europe, capitals managed to mitigate their losses, while second-tiers were heavily hit by GDP falls, after a 'flourishing' phase between 2000 and 2007.

The other three arguments are more direct and easier to test in a preliminary way. This section looks at the distribution of population in the core cities, agglomerations and functional urban areas (MUAs and FUAs as defined by ESPON, 2007) of the urban regions, to verify the actual role of the core city as the focal point of the wider area and the potential size increase of considering the urban region as an 'extensive city'. It also checks the index of metropolitan fragmentation for an account of the existing scope for

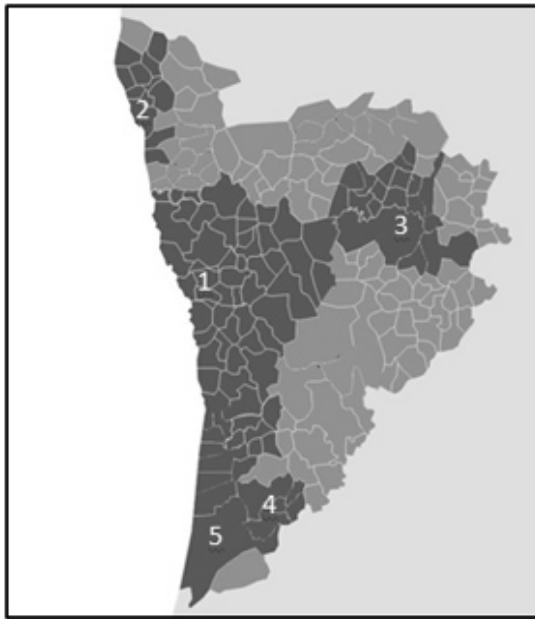


greater institutional integration. Lewis (2004) notes how the usual measurements of this index (number of governments per capita) do not consider differences in size of municipalities. For example, a dominant core city with 90% of the metropolitan population surrounded by nine small towns sharing the other 10% would be considered more fragmented than three urban centres of similar size. But in reality, “*few real-world observers would label [the first case] as highly fragmented*” (Lewis, 2004: 98), due to the overwhelming dominance of the core. Therefore, Lewis proposes an index that measures the dispersion of population across units, by summing the squared percentages of the total population in each municipality and subtracting the total from 1. The index ranges from 0 to 1 and denotes increasing fragmentation.

Finally, the analysis explores whether these cities would increase their functional performance when considering successively larger territorial scales. Encompassing larger scales often allows cities to capture proportionally more functions than justified by the correspondent population increase, but sometimes those scales reveal a metropolitan population more thinly served by important functions. This is an important argument for a city-regional policy to strive for or retreat from a metropolisation strategy. The question is addressed by comparing the overall index of top-level urban functions in Porto, Bristol and Antwerp, as determined by the BBSR study (Göddecke-Stellmann et al., 2011), and the population at the scale of the core city, core MUA and FUA. The overall index of metropolitan functions is based on the sum of the partial indexes of individual LAU2 units in the BBSR database. The IGEAT team at Université Libre de Bruxelles provided an additional table listing all LAU2 units in European MUAs and FUAs, which was used to cross both datasets.

### **5.3.1 Population distribution and institutional fragmentation**

Figure 5.6 below shows the ESPON-defined MUA and FUA boundaries for the three urban regions. Their population distribution and the overall level of institutional fragmentation is provided in Table 5.2.



Porto MUAs (1-5) and FUA



Bristol MUAs (1-4) and FUA



Antwerp MUAs (1-2) and FUA

Porto: MUA 1 - Core City  
MUA 2 - Povia  
MUA 3 - P.Ferreira  
MUA 4 - Feira  
MUA 5 - Ovar

Antwerp: MUA 1 - Core City  
MUA 2 - Mechelen

Bristol: MUA 1 - Core City  
MUA 2 - Clevedon  
MUA 3 - Weston  
MUA 4 - Bath

**Figure 5.6** – The urban regions of Porto, Bristol and Antwerp, as defined by ESPON 1.4.3 (2007). Dark colours indicate Morphological Urban Areas (MUAs); light colours indicate Functional Urban Areas (FUAs). ESPON considers Porto a Poly-FUA in the sense that it integrates several contiguous FUAs, but the urban region is treated here as a single entity. Note how ESPON considers several MUAs in an urban region, unlike the more ‘core-periphery’ definition of metropolitan regions by Eurostat (2015) and OECD (2012b), based around a single core city.

	PORTO	BRISTOL	ANTWERP
<b>Popul. Core City</b>	237.591	442.500	493.517
<i>% total</i>	<i>11,8%</i>	<i>39,9%</i>	<i>34,0%</i>
<b>Popul. Core MUA</b>	958.452	255.801	395.926
<i>% total</i>	<i>47,5%</i>	<i>23,1%</i>	<i>27,3%</i>
<b>Popul. other MUAs</b>	146.992	88.859	81.927
	86.826	82.560	
	78.291	21.281	
	24.131		
<i>% total</i>	<i>16,7%</i>	<i>17,4%</i>	<i>5,6%</i>
<b>Popul. FUA</b>	484.850	218.222	480.432
<i>% total</i>	<i>24,0%</i>	<i>19,7%</i>	<i>33,1%</i>
<b>No. Local Govs.</b>	23	4	50
<b>Index of Fragmentation</b>	0.929	0.716	0.872

**Table 5.2** – Demographic distribution and institutional fragmentation in Porto, Bristol and Antwerp (source: population data in MUAs and FUAs from ESPON, 2007)

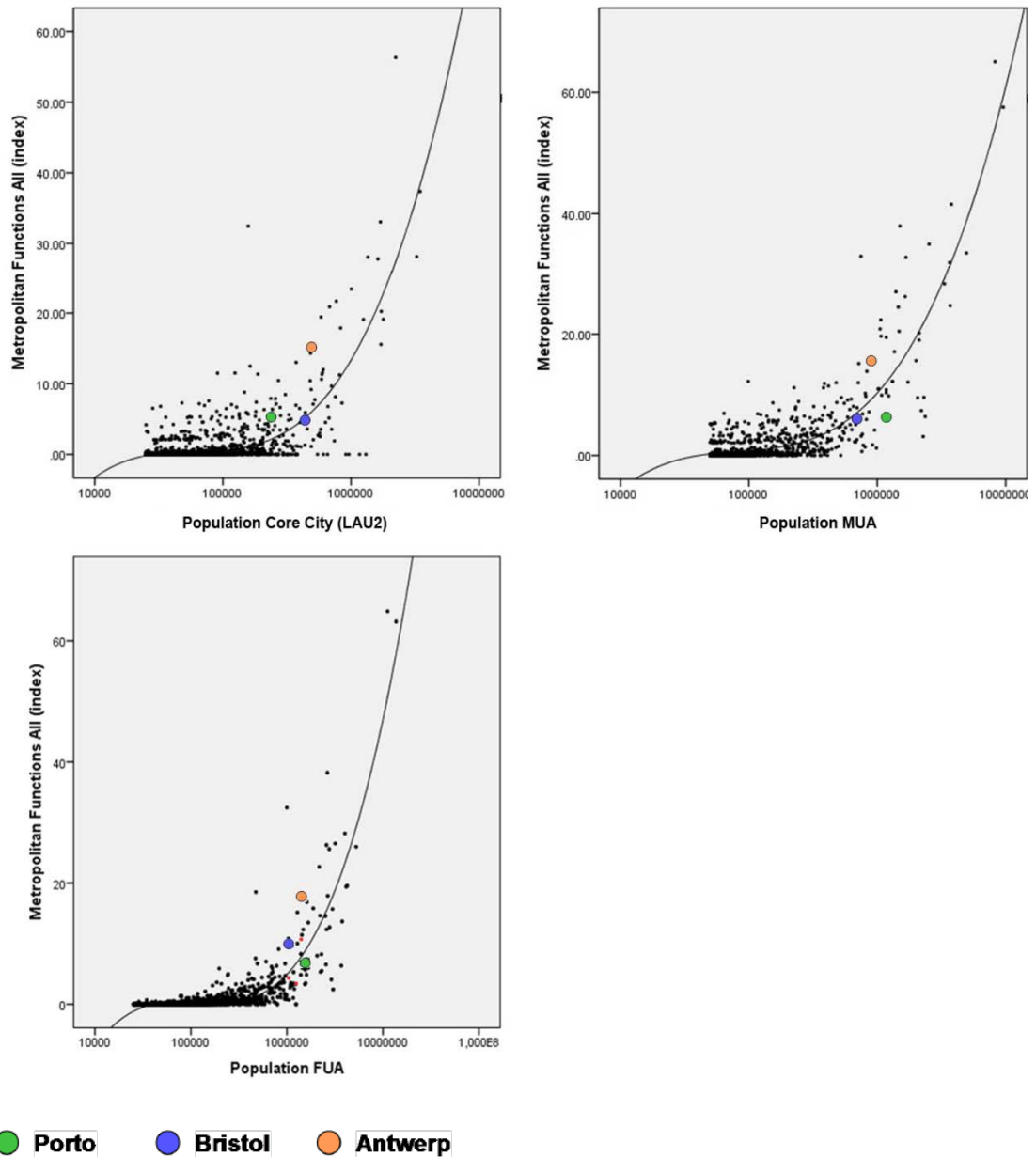
In all three cases the percentage of population living in the core city is lower than the population living elsewhere in the urban region. This is more visible in Porto, due to its administrative boundaries (the core city is not even the most populated municipality), but also due to the high number of additional secondary MUAs with quite significant population numbers. But it also stands out that a large proportion of the population is spread across the functional urban area outside any morphological agglomeration: 20% in Bristol, 24% in Porto and 33% in Antwerp - hence the high densities detected for the three cases at the ‘metropolitan region’ scale (see table 5.1). In this sense, the table above suggests that Porto is both polycentric (many MUAs) and dispersed (high FUA population). Dispersion across the FUA is also the case of Antwerp, although the higher concentration in the core city and fewer secondary MUAs suggest lower polycentricity. Bristol is less demographically dispersed, with more people concentrated in the core city

and fewer in the FUA, but very polycentric, with a population living in secondary MUAs comparable to Porto. Despite the different proportions, which highlight the distinction between polycentricity and dispersion, the overall numbers suggest that all cities experience a substantial increase in size if they operate as urban regions.

The added percentage of people living in the core municipality and the rest of the core MUA is similar in all cases (between 59% and 63%) and it is clear that this constitutes the core of each urban region. A large entity acting as a coordinated actor can have a stronger political voice and is more entitled to speak on behalf of all inhabitants of the urban region, but just this potentially decisive core corresponds to 23 municipalities in Antwerp, eight in Porto and three in Bristol. The levels of institutional fragmentation change from place to place: Bristol is the least fragmented region, according to the index (0.716), while Porto and Antwerp are more fragmented (0.929 and 0.872). Porto has fewer municipalities but ranks higher in fragmentation due to the smaller core municipality, which diminishes its role as a focal point of the region. The size of the city of Antwerp acts a factor that reduces the effective fragmentation (Lewis, 2004) and may allow the city to set the agenda for a common discourse in the urban region. In this sense, an argument for integration from the perspective of the mutual need for institutional consolidation can particularly be made for Porto. However, considering the demographic spread and the existence of other important MUAs in the urban region, it seems that all three cities do need to rely on the larger scale to achieve the benefits of agglomeration, whether by tying up polycentricity or consolidating dispersion.

### **5.3.2 Size and functions in second-tier urban regions**

While the detailed exploration of the presence and distribution of urban functions in second-tier cities will be done in chapter 6, a preliminary indication of what it would mean for Porto, Bristol and Antwerp, as far as functional performance goes, to consider integration at increasingly larger territorial scales, can be conducted here. Figure 5.7 shows their relative functional performance at different territorial scales.



**Figure 5.7** – Comparison of functional performance of Porto, Bristol and Antwerp at core city (CC), MUA and FUA scales. CC:  $n=2647$ ,  $R^2=0.578$  / MUA:  $n=1015$ ,  $R^2=0.741$  / FUA:  $n=125$ ,  $R^2=0.645$  (source: Cardoso and Meijers, 2013)

At the core city level, Porto, Bristol and Antwerp are on or above the regression line. All are relatively prosperous for EU27 standards and a high level of important functions is expected. However, there is some bias caused by municipal boundaries: when core cities are administratively under-bounded (see the case of Porto) they will have an exaggerated concentration of functions for a relatively small population. The next MUA level corrects this bias and relates the index of urban functions to the main built-up agglomeration in

the urban region. Antwerp is still above the regression line, reflecting its relative prosperity and the weaker role of secondary MUAs, while Porto and Bristol rank comparatively lower than at the core city scale: they fall below the regression line and have less functions than their demography would suggest. However, all three cities have a slightly lower relative functional performance at this scale, indicating that the population increase of the core MUA (often characterised by suburbanisation and residential uses) is not matched by an increase of urban functions – the centres in the core MUA can profit from their proximity to the core city (e.g. in terms of population growth) but cannot retain important functions themselves (chapter 6 will discuss this further from the perspective of the ‘borrowed size’ debate; see Alonso, 1973). At the FUA level, there is a clear improvement. This is more visible in Bristol, performing even better than at the core city scale and reflecting the strong role of other MUAs like Bath, but Antwerp and Porto also rise when compared to the previous scale.

This means that, rather than considering just the main agglomeration as the focal point of urban functions, the FUA scale (which includes secondary MUAs) is where these cities gather a wider set of urban functions when compared with the population considered. These results agree with the indications provided by the demographic analysis above and are valid both for compact and polycentric arrangements (Bristol) and more dispersed territories (Antwerp): urban functions will emerge at alternative centres outside the core city but also at any given point in the urban region outside established centres. However, the gains of Bristol compared to Antwerp suggest that greater improvements can occur where other strong centres are part of the urban region. Porto, less polycentric than the former but less dispersed the latter, has therefore less functional gains than Bristol but more than Antwerp. For all cases, this goes against the core-periphery mentality distinguishing the ‘urban’, ‘suburban’, ‘peri-urban’ or ‘rural’, and justifies the use of metropolisation as a lens to interpret second-tier urban regions. It also responds, in a preliminary form, to the initial question about the three case studies: it seems that they would have something to gain from the urban region scale.

## 5.4 Summary and conclusions

This chapter presented a portrait of Porto, Bristol and Antwerp that justifies their role as solid case studies for the analysis of the processes and strategies of metropolisation in second-tier urban regions. The revision of the selection process showed the successive steps leading to the final choice. They are second-tier cities in countries facing a dominant capital, both in economic and political terms, and share interesting historical similarities as extrovert and mercantile cities detached from the courtly mentality of national capitals. But there are also important differences: Porto is the only second-tier city in Portugal, in a national system which is demographically bipolar but economically and politically primate. London is as detached from Bristol as from any other city, and English second-tiers will rather compete with each other than confront the capital. The case of Antwerp is more ambiguous, as it was a world city in its own right for centuries, but current conditions make the city more secondary, given the dominance of Brussels and the fact that Antwerp is not even the capital of Flanders.

This variability confirms one of the assumptions of the study: there is no single definition of a second-tier city and, despite the loosening of national borders and the added powers of city (or city-regional) agency, place-specific contexts and historical trajectories play a major role in the fortunes of second-tier cities today. The different ways in which Porto, Bristol and Antwerp followed their 'symbolic' and 'material' strategies further illustrate this point. Therefore the option for a political-administrative, rather than a rank-based functional definition for second-tier cities, as argued in chapter earlier, seems entirely justified. This also supports the option for a case-sensitive methodology detecting the variability and specificity of individual cases as a way to add nuances and conceptual richness to a sometimes over-generalised phenomenon.

The initial selection process uncovered patterns of large-scale urbanisation in Porto, Bristol and Antwerp, which were supported by the analysis that followed, asking whether an argument in favour of metropolisation can be made for the three cities. Porto, Bristol and Antwerp have indeed a large share of population outside the core city, and even the core MUA, not only in alternative centres, as in Bristol, but also dispersed across the urban region, as the features of extensive urbanisation discussed in chapter 3 suggest. They also have high overall densities at that scale. However, the distinction

between polycentricity and dispersion that emerged at that stage reminds us of how 'similar' territories, in terms of size and rank, can have different spatial arrangements as urban regions. The three case studies also increase their functional performance, in relation to population, when gathering functions at the FUA scale. Finally, accepting institutional integration as a driver of economic success, the results of the fragmentation index suggest that much can still be done to acknowledge the urban region scale, either by effectively merging municipalities, creating a city-regional governance structure, or improving the collaborative environment between the existing institutions (Feiock, 2004; Harding et al., 2010; Nelles, 2013). In summary, the potentials for increased size, added functional performance and institutional integration suggest that an initial argument in favour of metropolisation can be made.

Indeed, the analysis shows that these cities do need to rely on the larger scale to achieve the potential benefits of size and diversity, and that core cities do not play a dominant role in their urban regions: smaller compact nodes and dispersed urbanisation outside predefined centres aggregate people and functions, but also an important part of the decision-making actors, given the existing political fragmentation. In this sense, distinctions between 'cities' and 'other' spaces become more ideological than real: a large, diverse and complete city may become apparent only at the urban region scale. Therefore, a spatially selective, city-centric view of the urban region is not enough and an interpretative tool that recognises a process of 'citification of the region' rather than the 'regionalisation of the city' is needed, expressed in a key feature of metropolisation: the notion that the demands and qualities of the 'proper' city must be extended to the urban region to ensure an effective consideration of all expressions of the 'urban'.

This chapter has shown that Porto, Bristol and Antwerp are appropriate settings for the explorations that follow. It is time to start the empirical work, by going back a few steps and looking again at the larger set of cases of European second-tier urban regions to examine the first aspect proposed in the analytic framework: the overall presence and spread of urban functions in primate and second-tier urban regions.



## CHAPTER SIX. The overall presence and spatial distribution of urban functions in primate and second-tier urban regions

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The previous chapter concluded with a preliminary analysis, focused on the three main cases studies, about whether second-tier cities would have anything to gain by pursuing integration with their urban region. To answer that question, one of the main factors considered was whether integrating a larger spatial scale means that the resulting urban entity would gather a larger and more diverse set of important urban functions, which the individual centres cannot provide on their own. In fact, the discussion in the preceding chapters has made several important points about urban functions. First, gathering many and diverse urban functions was argued as a key attractor of population and firms and a driver of economic growth (Ahrend et al., 2015, McCann, 2015). Second, the incentive to capture more urban functions may be particularly present in second-tier cities, given their apparent lower functional performance when compared with primate cities (Göddecke-Stellmann et al., 2011). Third, this gathering of urban functions can happen either through aggregation in a single large core, or, in the case of smaller cities, by networking with other centres (Camagni et al., 2015). Fourth, the spatial distribution of functions across an urban region can be a major trigger or a barrier to integration, as linkages between places with complementary functions and the exploration of their synergies drive the creation of ‘network cities’ of regional scale (Batten, 1995). Fifth, some form of functional and/or institutional integration is necessary so that this network of centres is able to capture an array of functions comparable to a single core of equivalent size (Lambregts, 2006; Meijers, 2008).

Earlier studies indeed suggest that the distinctive characteristics of second-tier urban regions can be particularly well illustrated by the analysis of the presence and distribution of urban functions. The existing literature hints at two major aspects that may reveal clear contrasts, especially between primate and second-tier urban regions. The first concerns the overall presence of urban functions as a function of population size, and whether there is an imbalance between both types of city, expressed by a 'primate city bonus' versus a relative loss of performance in second-tier cities. The second refers to the spread of urban functions across the urban region, namely the different ways dominant capitals and 'weaker' second-tiers are able to exploit the scale of their hinterland to support their urban functions, and how they manage either to centralise important functions in the core city to the detriment of other places or to shape a balanced functional distribution across the urban region. Exploring these two aspects, establishing a set of characteristics which are specific to second-tier urban regions and discussing how far they affect integration processes, is the purpose of this chapter.

The highly relevant aspect of the presence and spatial distribution of urban functions is the first step of the search for the distinctive features of second-tier urban regions and the prospects of their integration. As discussed in the methodological chapter, the nature of this particular analytic aspect and the availability of an extensive database (Göddecke-Stellmann et al., 2011) justify a wide-ranging comparison across Europe. This may help define a 'region of variability' of shared features of second-tier urban regions before entering the detailed analysis of the main case studies. The same chapter also explained that, not only due to the arguments of earlier research hinting at their contrasts, but also the state of second-tier cities in policy and research and the dominant models of urban region in existing studies, the more urgent and potentially more illuminating comparison should explicitly distinguish second-tier and primate urban regions. By doing so, the analysis can highlight a new and still unexplored set of strategic options for the former, whose importance is proportional to the extent to which they are hampered or neglected in their national urban systems.

The next section summarises the theoretical arguments suggesting that the functional structure of primate and second-tier urban regions is indeed different, culminating in four specific empirical questions about the overall presence and spatial

distribution of urban functions. Then, section 6.2 presents the research approach and the empirical results. The analysis compares the functional performance of primate and second-tier cities, the influence of national urban systems in that performance, the capacity of both types of city to exploit the scale of their urban region to boost functional performance, and the spatial distribution of urban functions across the urban region. Finally, section 6.3 discusses the findings and their contribution to the larger argument of this research project, setting the scene for the chapters ahead.

## **6.1 The functional structure of primate and second-tier urban regions**

### **6.1.1 Primate city bias**

The discussion in the introduction and the theoretical chapters (namely section 3.3.1 introducing the concept of metropolisation) stressed the fact that the size of cities is argued in the literature as an explanatory factor for several aspects of the urban economy, not in the least for the emergence of agglomeration economies allowing greater overall and individual productivity, faster career progression, better matching of jobs, and more innovation and consumption opportunities for firms and citizens (Champion et al., 2014; Ahrend et al., 2015; McCann, 2015).

Size is also important for the presence of urban functions and hosting many and diverse functions has been associated with greater economic productivity and stronger population growth (McCann, 2015). In fact, especially when perceived as sites of consumption rather than production, cities tend to be more attractive for residents and firms and grow faster when they are served by a larger and more diverse set of amenities and services (Glaeser et al., 2001; Markusen and Schrock, 2009). Conversely, places that lack this functional mass and diversity will be less attractive and may experience weaker economic prospects. Size is an important factor, as there is a minimum critical mass *“necessary for high-end metropolitan functions, amenities and places.”* (Lambregts, 2006:119-120). In their study of cultural amenities in north-west Europe, Burger et al. (2015) suggest that size is the single most important factor explaining their presence. The larger an urban system, the more functions it has gathered throughout history and the more new functions it may attract (Hohenberg, 2004).

Therefore, all other things being equal, the size of an urban system and the presence of urban functions should be correlated. But this may not be as linear as it seems. The political and economic bias affecting second-tier cities in Europe, especially in highly centralised countries where a ‘winner-takes-all’ approach tends to favour the cities which are already more successful at the cost of other places (Ades and Glaeser, 1995; Crouch and Le Galès, 2012), may affect this correlation and increase the functional gap between second-tier and primate cities beyond differences in size. Throughout Europe, capitals have often profited from centuries of accumulation of public investment, partly rational as return on investments was (perceived to be) higher, but also out of a desire to awe and impress (Dijkstra, 2013). This historical trajectory is arguably imprinted in the current discrepancies between the demographic potential and the functional importance of primate and second-tier cities, as revealed by the findings of the BBSR study (Göddecke-Stellmann et al., 2011: 103), whose map (reproduced above at the end of section 2.2.2) clearly pinpoints the functionally ‘underperforming’ cities.

In summary, it is likely that being a primate or second-tier city in a given national context affects the linearity of size as an explanatory factor for the presence of urban functions. Two research questions can evaluate this: first, to what extent is there an overall ‘primate city bonus’ that increases the functional gap between both types of city, making primate cities outperform second-tiers beyond what can be rationalised from their different size? And, second, does that bonus change according to the shape of the national urban system, namely by being larger in monocentric countries with dominant capitals and smaller in more polycentric countries?

### **6.1.2 Functional spread and absorptive capacity**

Earlier comparisons suggest that there may be different patterns of distribution of urban functions in primate and second-tier urban regions. This was discussed in the introduction and again in the conclusions of chapter 2, through the examples of Hohenberg’s comparison between capitals rapidly growing in a ‘central place’ framework and smaller cities slowly integrating into networks (2004), the distinction between ‘spiderweb’, concentric structures around ‘first order’ cities and the prevalence of

network systems elsewhere by Heynen et al. (1991), or the description of hierarchic relations between capital cities and smaller centres around them by Phelps et al. (2006). These differences should all have visible spatial manifestations.

The discussion so far has tried to distil the common features of these descriptions, namely the role of historically dominant cities and 'weaker', smaller cities in their respective urban regions. While both models gave rise to large and interconnected urban regions, the former can be more associated to a 'centrifugal' mode of growth (Champion, 2001), evolving from a monocentric to a polycentric condition. Two implications follow: first, their functional decentralisation process is hierarchic and progressive (core-to-periphery, large-to-small), with top-level functions still concentrated in core locations and fewer (and less important) functions elsewhere in the urban region; and second, only cities large enough to first attract or generate a large amount of urban functions were then able to trigger a redistribution process across the territory. This means that a dominant city will have greater ability to project its expansion agenda over the urban region and influence accordingly the functional organisation at that scale (Barry, 2000). Given the core-periphery hierarchy embedded in this process and the tendency of important urban functions to cluster at a few key locations, it is likely that such cities are able to exploit the scale of their urban region as a support base for their own core city-centric urban functions – an ability deemed here as 'absorptive capacity' – but will tend to keep the remaining urban region relatively 'empty' in terms of top-level functions.

Conversely, in less dominant 'second order' cities, centrifugal core city expansion and decentralisation played a lesser role. Such places were less subject to core-periphery hierarchies, and therefore may have built a functionally more fragmented but also more balanced urban system. Urban functions may have emerged at different points of the region due to place-specific factors rather than through decentralisation, making the city vs. hinterland contrast less visible here than in the case of primate cities. The emerging hypothesis is that, lacking both the attractive pull to aggregate, support and redistribute urban functions as well as the ability to override divergent local configurations and define a functional hierarchy for the larger region, these core cities will not empty out as much the remaining urban region of important functions, nor will they profit as much from the size of their hinterland for an increased functional performance.

This brings second-tier city development closer to Champion's 'incorporation mode' (2001), in which a large urban centre expands and merges with other expanding centres, which had previously been largely self-sufficient in terms of jobs and services, creating a more polycentric urban region where smaller centres form "*a more powerful catalyst for attracting extra non-residential activities than the centres emerging through the centrifugal mode*" (Champion, 2001: 664)<sup>42</sup>. Such centres will be better served by important urban functions than their own size would suggest. However, the second part of the hypothesis means that these individual urban functions draw mostly from local support rather than building upon the increased mass brought by the wider region scale: they may have often emerged *in situ* from a locally autonomous agenda, rather than from the tighter dynamics of a centrifugal decentralisation process. In other words, as far as size and functions correlate, the metropolitan basis for sustaining urban functions is not as fully exploited as in primate cities and these functions have potential for growth.

This has important implications for territorial development strategies: with fewer important functions in individual centres and a more spread out functional arrangement, there is greater need to rely on the urban region scale and to go beyond a spatially selective attention to core cities to achieve the encompassing set of functions, people and activities necessary to enjoy the potential benefits of agglomeration. As this is fueled by metropolitan integration that has not naturally occurred (Ahrend et al., 2015), it would imply that some urban regions have unfulfilled development potentials, and, in the words of Lambregts (2006), would profit from "*setting free the metropolitan potential and the agglomeration economies that are locked into it.*" (2006: 119) – in other words, an effort for greater integration, namely one that is best described through the concept of metropolisation. If this can be particularly argued for second-tier urban regions, this analysis may add a valuable contribution to the body of research pleading for greater attention and specific development strategies for them. Two further empirical questions will evaluate this in this chapter: first, are primate core cities, more than second-tier core cities, better able to exploit the scale of their urban region to support more urban

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<sup>42</sup> As noted before, this is still different from Champion's third typology, the 'fusion' mode, in which previously independent centres of similar size merge together as a result of their separate growth and improved linkages. The perception is that the more mixed and ambiguous incorporation mode is often disregarded in face of the polarising debates between the other two.

functions? And second, does their remaining urban region have a smaller share of important functions and is it more reliant on the core city, in contrast to a more balanced functional distribution in second-tier urban regions?

### *Agglomeration shadows and borrowed size*

The hypothesis that urban functions are more equitably spread over the urban region of a second-tier city than in the case of a primate city engages with recent developments of the agglomeration shadow vs. borrowed size debate (Burger et al., 2015; Meijers and Burger, 2015; Partridge et al., 2009). The distribution and presence of urban functions in an urban system consisting of a dominant core city and smaller centres in the surrounding urban region often reflects the presence of ‘agglomeration shadows’ (Burger et al., 2015). Agglomeration shadows are a prediction of New Economic Geography (e.g. Krugman, 1993), building upon central place theory, denoting the negative impact of larger urban centres over the smaller centres in their urban region, mainly affecting the presence of firms, but also used to understand population growth (Partridge et al., 2009) and the presence of urban functions (Burger et al., 2015). A small centre under the ‘shadow’ of a larger centre nearby would have fewer urban functions than an isolated centre of the same size due to spatial competition effects. The existence of an encompassing set of functions in a large and easily accessible centre would override the opportunity and need for equivalent functions to emerge in alternative surrounding places. Burger et al. (2015) have looked at the spread of high-end cultural amenities in north-west Europe to conclude that larger cities do cast a shadow on the smaller surrounding centres, as predicted by NEG models. In the case of dominant primate cities, this shadow may be cast over increasingly large territories, as it is fuelled by a self-sustaining cycle of new functions gravitating towards existing ones (Hohenberg, 2004). Such cumulative causation processes are fostered by a variety of economies of scale.

Of course, some studies have also shown the opposite effect. Phelps et al. (2001) explain how small places near London offer a good environment for particular types of service employment and retail due to the beneficial combination of access to the agglomeration benefits of London and the lower agglomeration costs, mainly in terms of

real estate prices. However, this may be confined to particular functions, often leading to monofunctional enclaves rather than actual self-sustaining centres able to co-create and support functional diversity, as argued by Champion for the incorporation mode. If only the ‘mass’ component of functional distribution is present, and the ‘diversity’ component is missing, urban centres will not provide the encompassing set of services and amenities argued above as key for urban attractiveness, even if the agglomeration shadow seems less present. With this distinction in mind, chapter 7 will compare the socio-economic configuration of primate and second-tier urban regions to show that the smaller centres around primate cities do tend to be more dominated by a single socio-economic typology, usually associated with ‘suburban’ growth modes that override local arrangements, while those in second-tier urban regions seem to have preserved more the socio-economic mix typical of autonomous urban settings and, in some cases, are closer to replicating the configuration of the core city at a smaller scale.

It is important to note that, while growth potentials in terms of urban functions are limited in the surrounding areas of large dominant cities, this does not necessarily mean that population growth is equally restricted. In fact, having access to the functions of the primate city through connectivity is a main driver of such growth (Partridge et al. 2009). This is a manifestation of one type of ‘borrowed size’, namely ‘borrowed performance’. In its original conceptualisation by Alonso (1973: 200), borrowed size is about “*a small city or metropolitan area exhibiting some of the characteristics of a larger city if it is near other population concentrations.*” However, since these characteristics can either refer to ‘performance’ (e.g. population growth or per capita income) or to ‘functions’, it seems more precise to make a distinction between borrowing ‘functions’ and borrowing ‘performance’ (Meijers and Burger, 2015).

The relevance of this distinction is that the spatial patterns of borrowed functions and borrowed performance, as well as agglomeration shadows, are likely to be dissimilar for primate and second-tier cities. The former are likely to cast a functional agglomeration shadow over their wider urban region, from which they borrow functions, in the sense that they congregate many urban functions in the core whose population support base - essential for sustaining them – draws on the urban region scale. In exchange, having access to these functions may imply that the wider area borrows



performance from the central city, which may become manifest in higher population growth or higher incomes, but being in the shadow of a primate city also hampers their ability to sustain important functions themselves.

In contrast, second tier cities which have evolved in the non-centrifugal mode described above may, on one hand, impose less constraints over the development of nearby centres and, on the other hand, have less ability to congregate a full set of urban functions to the detriment of other places: if second-tier cities tend to be functionally less equipped than their size would justify, as the BBSR study suggests, that ‘encompassing set of functions’ potentially emptying out other places is not only less constrained by core city dominance but also incomplete, opening up all kinds of opportunities for smaller places to create functions missing at the core. As a result, second-tiers cast a smaller or incomplete agglomeration shadow over the wider urban region.

Also, rather than just borrowing functions from the surrounding metropolitan territory, second-tier cities may also borrow performance from this area, as nearby centres will be more than just ‘satellites’ emerging from decentralisation, and connectivity will be mutually beneficial rather than just favouring smaller centres. Vice versa, the potential for surrounding areas to borrow performance from the second-tier city is smaller, with likely negative effects in population growth; but the looser functional hierarchies mean that more places beyond the core city will be able to borrow size from the urban region to support their urban functions. Meijers and Burger (2015) show that in urban regions without an overly dominant city, size and function are indeed more disconnected.

## **6.2 Research approach and results**

The analysis is divided in four steps measuring differences in the presence of urban functions, their variation in different urban systems, how the size of the urban region affects the functional performance of the core, and the relative spread of functions across the various parts of the urban region. The techniques used at each stage, including the data sources (the BBSR study of urban functions, by Göttsche-Stellmann et al., 2011), the geographical detail (namely MUAs and FUs as defined by ESPON, 2007) and the

variables in the models, were described in chapter 4. The definition of the primate and second-tier cities used in the comparative analysis emerges from the list provided by the ESPON report (2012a), with the minor adjustments also noted in chapter 4. The table below presents the final list of 26 primate and 112 second-tier cities. Naturally, the main cases studies of Porto, Bristol and Antwerp are included.

Primate cities	Second-tier cities				
Amsterdam	Aalborg	Craiova	La Coruna	Nottingham	Torino
Athens	Aarhus	Daugavpils	Lausanne	Nürnberg	Toulon
Berlin	<b>Antwerp</b>	Debrecen	Leeds	Odense	Toulouse
Bratislava	Arnhem	Dresden	Leicester	Ostrava	Turku
Brussels	Bari	Düsseldorf	Leipzig	Palermo	Valencia
Bucuresti	Basel	Edinburgh	Lens	Pecs	Varna
Budapest	Belfast	Eindhoven	Liège	Plovdiv	Wloclawek
Dublin	Bergen	Enschede	Lille	Plzen	Wroclaw
Helsinki	Bielefeld	Firenze	Linz	<b>Porto</b>	
Kobenhavn	Bilbao	Gdansk	Liverpool	Poznan	
Lisboa	Birmingham	Genève	Lodz	Rennes	
Ljubljana	Bologna	Genova	Lublin	Rotterdam	
London	Bordeaux	Gent	Lyon	Rouen	
Madrid	Bremen	Glasgow	Malaga	Salerno	
Oslo	Brescia	Göteborg	Manchester	Salzburg	
Paris	<b>Bristol</b>	Graz	Mannheim	Sevilla	
Praha	Brno	Grenoble	Maribor	Sheffield	
Riga	Bydgoszcz	Győr	Marseille	Stavanger	
Roma	Cadiz	Hannover	Metz	Strasbourg	
Sofia	Cardiff	Iasi	Miskolc	Stuttgart	
Stockholm	Catania	Innsbruck	Montpellier	Szczecin	
Tallinn	Charleroi	Katowice	Murcia	Szeged	
Vilnius	Chemnitz	Kielce	Nantes	Tampere	
Warszawa	Cluj-Napoca	Köln	Napoli	Tartu	
Wien	Constanta	Kosice	Newcastle	Thessaloniki	
Zürich	Cork	Krakow	Nice	Timisoara	

**Table 6.1** – Primate and second-tier cities included in the analysis.

### 6.2.1 The performance of primate and second-tier cities

The first hypothesis suggests that primate cities outperform second cities in terms of urban functions, in the sense that they host more functions than can be rationalised from their size or international network embeddedness. Table 6.2 presents two models in which the effect of being a primate or a second-tier city on the presence of urban functions is explored.

	<u>Model 1</u> Urban functions - Baseline model	<u>Model 2</u> Urban functions - primate & second-tier city dummy
Constant	-.085 (.173)	-.048 (.169)
Size MUA (*1000)	.009 (.000)**	.008 (.000)**
Size hinterland (*1000)	-.00001 (.000)	-.00001 (.000)
International political networks	.265 (.014)**	.243 (.014)**
Tourism networks	.033 (.003)**	.027 (.003)**
Flight connections	.134 (.014)**	.115 (.013)**
Primate city (dummy)		4.508 (.453)**
Second-tier city (dummy)		.173 (.181)
Country dummies	YES	YES
R	.938	.941
Adjusted R <sup>2</sup>	.878	.884
F	415.476**	415.607**
N	1963	1963

*Standard errors in parentheses. \*\*  $p < 0.01$ ; \*  $p < 0.05$ .*

**Table 6.2** – OLS regression results for the presence of urban functions (index).

Model 1 presents a baseline regression. The basic variables are able to explain the distribution of urban functions across the European urban system very well (adjusted  $R^2=.878$ ). Size is a particularly important determinant of the presence of urban functions, and the three network embeddedness controls are also significant. Somewhat counter to the expectations previously implied, the size of the hinterland does not seem to influence the presence of urban functions. In model 2, the variables of interest are added, namely the primate and second-tier city dummy variables. As anticipated, having primate city

status increases the amount of urban functions quite substantially (+4.5). This corresponds to population increase of half a million. Given that the average size of a primate city MUA agglomeration is just over 2 million, this means a surplus in the range of 25%, reserved for primate cities only - being a second-tier city does not offer additional benefits (the second city dummy is not significant). This reveals a substantial 'primate city bonus'; a surplus of urban functions that cannot be explained by the size of the city or its network embeddedness.

While model 2 explains a total index of urban functions, models 3-6 in Table 6.3 provide similar models for the four sub-indexes addressing the presence of functions related to business (model 3), science (model 4), culture (model 5) and sports (model 6), following the categories used in the BBSR study.

	<u>Model 3</u> Business	<u>Model 4</u> Science	<u>Model 5</u> Culture	<u>Model 6</u> Sports
Constant	.319 (.209)	.326 (.188)	-.311 (.245)	-.495 (.290)
Size MUA (*1000)	.007 (.000)**	.005 (.000)**	.008 (.000)**	.009 (.000)**
Size hinterland (*1000)	.000 (.000)	-.000 (.000)	-.000 (.000)	-.000 (.000)
International political networks	.209 (.017)**	.505 (.015)**	.095 (.020)**	.020 (.024)
Tourism networks	.011 (.004)**	.008 (.004)*	.036 (.005)**	.036 (.006)**
Flight connections	.285 (.017)**	-.034 (.015)*	.081 (.020)**	.062 (.023)**
Primate city (dummy)	5.629 (.562)**	.087 (.506)	6.586 (.660)**	3.061 (.781)**
Second-tier city (dummy)	.497 (.224)*	-.232 (.202)	.076 (.263)	.249 (.311)
Country dummies	YES	YES	YES	YES
R	.908	.872	.868	.821
Adjusted R <sup>2</sup>	.821	.755	.749	.669
F	250.398**	169.354**	163.533**	110.948**
N	1963	1963	1963	1963

*Standard errors in parentheses. \*\*  $p < 0.01$ ; \*  $p < 0.05$ .*

**Table 6.3** – OLS regression results for the presence of urban functions in the categories of business, science, culture and sports.

Table 6.3 shows that the primate city bonus is highest for cultural functions (+6.6), followed by business (+5.6) and sports (+3.1). There is no such bonus for scientific functions. This can be explained by the fact that these functions (such as universities and related activities) are not footloose and their spatial distribution is generally inherited from the past. Their strong local embeddedness seems to make them resistant to the attractive pull of large capital cities. By contrast, the high primate city bonus for cultural functions is related to a tradition of investment in cultural venues and events, not just to cater to the needs of the local aristocracy, but also to sell a positive image of a country and its capital to the outside world. Second-tier cities also enjoy a bonus in business functions (model 3), but, in absolute terms, over ten times smaller than for primate cities.

### **6.2.2 The primate city bonus in different national urban systems**

The discussion so far suggests that the primate city bonus is not similar for all primate cities, but is related to the extent of their dominance within the national urban system. In monocentric systems, with a dominant city at the top, chances for a ‘winner takes all’ scenario in terms of important urban functions are higher given the absence of strong competition from other centres (e.g. in the form of political voice influencing policy). In other words, the positive effect of being a primate city may be moderated by the shape of the urban system, and is likely to be higher in more hierarchically organised, monocentric contexts. Conversely, chances for second-tier cities to attract important urban functions are likely to increase when a dominant capital is absent. This can be tested using interaction terms that show how the effect of being a primate or second-tier city varies according to the shape of the national urban system, which is measured along a monocentric-polycentric dimension (Meijers and Sandberg, 2008).

Model 7 in Table 6.4 presents the overall pattern for all urban functions together. Clearly, the primate city bonus revealed by model 2 is of the same magnitude (+4.5). Being in a more polycentric national urban system introduces a negative trend (also in models 8-11), albeit not significant. The interaction term ‘Primate city X Polycentricity’ is also not significant, implying that the primate city bonus does not differ in more monocentric or more polycentric countries.

	<u>Model 7</u> All funct. - Interactions	<u>Model 8</u> Business - Interactions	<u>Model 9</u> Science - Interactions	<u>Model 10</u> Culture - Interactions	<u>Model 11</u> Sports - Interactions
Constant	.262 (.715)	.573 (.514)	.607 (.796)	.346 (1.029)	-.633 (1.126)
Size MUA (*1000)	.008 (.000)**	.008 (.000)**	.005 (.000)**	.008 (.000)**	.008 (.000)**
Size hinterland (*1000)	-.000 (.000)	-.000 (.000)	-.000 (.000)	-.000 (.000)	-.000 (.000)
International political networks	.242 (.014)**	.190 (.017)**	.514 (.016)**	.075 (.020)**	.044 (.024)
Tourism networks	.0279.003)**	.011 (.004)**	.008 (.004)*	.036 (.005)**	.037 (.006)**
Flight connections	.114 (.013)**	.285 (.016)**	-.036 (.015)*	.079 (.019)**	.061 (.023)**
Primate city (dummy)	4.460 (.454)**	5.622 (.558)**	.016 (.505)	6.515 (.653)**	3.048 (.778)**
Second-tier city (dummy)	-.100 (.199)	.077 (.245)	-.011 (.222)	-.630 (.287)*	.223 (.342)
Polycentricity	-.929 (1.967)	-.837 (2.417)	-.769 (2.188)	-2.038 (2.828)	.478 (3.371)
Prim. city X Polycentricity	1.244 (.967)	5.195 (1.188)**	1.126 (1.075)	7.327 (1.390)**	-9.408 (1.657)**
2 <sup>nd</sup> tier city X Polycentricity	1.907 (.604)**	2.895 (.742)**	-1.654 (.672)*	4.884 (.868)**	.375 (1.035)
Country dummies	YES	YES	YES	YES	YES
R	.942	.909	.873	.872	.825
Adjusted R <sup>2</sup>	.884	.824	.758	.756	.674
F	416.036**	254.989**	171.010**	169.128**	113.271**
N	1955	1955	1955	1955	1955

Standard errors in parentheses. \*\*  $p < 0.01$ ; \*  $p < 0.05$ .

*Polycentricity indicator is mean centred. Polycentricity-scores for Cyprus, Luxembourg and Malta were not deemed meaningful given the low number of cities in these countries, which slightly reduces the number of cases.*

**Table 6.4** – OLS regression results for the moderating role of the national urban system on the effect of primate and second-tier city status on the presence of urban functions.

This does not confirm the hypothesis that this functional bonus varies according to the shape of the national urban system. However, a remarkable difference rests with second-tier cities. The significant interaction term ‘Second-tier city X Polycentricity’ suggests that second-tier cities in more polycentric countries perform substantially better than those in monocentric countries. With primate cities keeping their high performance and second cities performing better in polycentric national urban systems, it would seem that such a model is in essence more competitive than a hierarchic monocentric model.

Models 8-11 add some nuance by examining specific functional sectors. Business functions are more present in both second-tier and primate cities of the more polycentric countries. Cultural functions (model 10) are spread in a similar pattern with second-tier and primate cities in more polycentric countries both performing better. Quite in contrast, scientific functions (model 9) seem overall less present in more polycentric countries, and appear more in second-tier cities in monocentric countries. Finally, the pattern for sports functions contradicts the overall pattern of model 7. The negative sign of the significant interaction variable ‘Primate city X Polycentricity’ suggests that primate cities in more monocentric countries have substantially more sports functions than those in polycentric countries.

### **6.2.3 The absorptive capacity of primate and second-tier cities**

An important reason why primate cities outperform second-tier cities may be their stronger absorptive capacity (or ‘attractive pull’ of urban functions). This can be explored by examining the extent to which they manage to profit from or exploit the size of their urban regions and turn it into a support base for their ‘inflated’ urban functions. Given their apparent ability to project an economic and political agenda over the urban region and thereby influence the development of the larger territory, it is likely that primate cities manage to absorb more of this population potential than second-tiers. Again, this can be measured using interaction terms that state to what extent the population in the urban region contributes to hosting more functions in a primate city (‘Primate city X Hinterland’) and a second-tier city (‘Second-tier city X Hinterland’). To ensure robustness, two different definitions of ‘hinterland’ are used. The first refers to the

Functional Urban Area (FUA) defined by ESPON 1.4.3 (2007). This variable was also used in the preceding models and elsewhere in this study. The second definition is based on the population basin that can be reached within 45 minutes by car from a particular core city, as provided by ESPON 1.1.1 (2005). For both models, the population size of the urban agglomeration itself was subtracted. See the results in Table 6.5.

	<u>Model 12</u> Absorptive capacity functional urban area	<u>Model 13</u> Absorptive capacity metro area (45 min)
Constant	-.058 (.164)	-.111 (.211)
Size MUA (*1000)	.008 (.000)**	.008 (.000)
Size hinterland (FUA) (*1000)	-.00001 (.000)	
Size hinterland 45minutes (*100k)		-.005(.002)*
International political networks	.176 (.015)**	.186 (.016)**
Tourism networks	.027 (.003)**	.027 (.004)**
Flight connections	.130 (.013)**	.112 (.014)**
Primate city (dummy)	5.458 (.455)**	7.202 (.566)**
Second-tier city (dummy)	.401 (.185)*	.562 (.197)**
Primate city X Hinterland (FUA)	.003 (.000)**	
Second-tier city X Hinterland (FUA)	.00014 (.00018)	
Primate city X Hinterland 45minutes		.246 (.028)**
Second-tier city X Hinterland 45min.		.071 (.009)**
Country dummies	YES	YES
R	,944	,946
Adjusted R <sup>2</sup>	,889	,893
F	413,878**	350,735**
N	1963	1963

*Standard errors in parentheses. \*\*  $p < 0.01$ ; \*  $p < 0.05$ . Hinterland indicators are mean centred.*

**Table 6.5** – OLS regression results showing the extent to which the population base of the urban regions can be absorbed by primate and second-tier cities to sustain a higher level of urban functions.



In all preceding models, the size of the urban region did not have a significant effect on the presence of urban functions. In model 12, by including the FUA-based hinterland indicator, we see that one of the reasons was that for some cities the hinterland adds positively to the presence of urban functions, but for others it does not. The interaction variable ‘Primate city X Hinterland’ in model 12 shows that the larger the hinterland of a primate city, the more it contributes to the presence of urban functions. However, a large hinterland in a second-tier city does not contribute to hosting more of such functions (‘Second-tier city X Hinterland’ is not significant). In other words, a primate city manages to absorb the population mass of its surrounding functional urban area and turn it into a support base for its urban functions. This ability seems to be absent in second-tier cities. The results are more or less replicated when using the second definition of the hinterland (model 13). Again, while the coefficient for hinterland is negative and now significant, we see that primate cities profit more from a larger hinterland, but second-tier cities equally manage to do that. Their absorptive capacity is nevertheless much less pronounced than in primate cities, namely 3.5 times smaller (.246 versus .071). Note that model 12 shows an even larger gap between both coefficients (21 times).

#### **6.2.4 Agglomeration shadow versus borrowed size**

The final hypothesis addresses the question whether the stronger absorptive capacity of primate cities also implies that their surrounding urban regions are emptied out of important functions. This is likely to be the case, and the urban regions around second-tier cities may encompass more urban functions than in the case of primate cities. In other words, primate cities are likely to cast an agglomeration shadow over their hinterland, whereas second-tier cities have the potential to borrow functions from their wider urban region. This question is approached by examining the spread of urban functions over the urban region. Table 6.6 presents the spatial distribution of urban functions across (1) the core city, (2) the remaining core urban agglomeration (MUA), (3) the remaining functional urban area (FUA) and (4) the remaining wider metropolitan area as defined by the BBSR report in 2011. Recall that this last metropolitan area is not defined for all our second-tier cities, meaning that the sample for this analysis is smaller. However, the availability of such a recent and encompassing database whose spatial

boundaries are defined precisely by the location of urban functions and which proposes a new spatial scale for integrated forms of policy making beyond the constraints of FUAs and MUAs justifies the addition of this new spatial scale to the analysis.

	Primate cities				Second-tier cities			
	Core City	Rest of MUA	Rest of FUA	Rest of BBSR	Core City	Rest of MUA	Rest of FUA	Rest of BBSR
Population	39.7%	17.2%	22.1%	21.0%	20.0%	9.7%	25.9%	44.4%
Functions (total)	72.6%	5.6%	7.2%	14.6%	49.0%	2.8%	10.4%	37.8%
Political-admin.	85.2%	5.2%	1.2%	8.4%	57.5%	0.0%	15.9%	26.6%
Business	83.1%	4.0%	4.3%	8.5%	65.7%	2.3%	8.1%	23.9%
Science	78.9%	4.9%	3.9%	12.3%	66.3%	1.4%	8.7%	23.6%
Culture	84.1%	2.1%	4.0%	9.8%	56.9%	5.3%	9.1%	28.7%
Sports	75.9%	3.5%	5.3%	15.2%	57.8%	3.9%	8.5%	29.8%
Tourism	63.7%	5.9%	9.9%	20.4%	42.5%	1.5%	10.3%	45.7%
Transport	49.2%	18.4%	16.3%	16.1%	42.9%	7.8%	12.4%	36.8%

**Table 6.6** – Distribution of urban functions over different parts of the urban region in primate (N=26) and second-tier cities (N=75).

First, note how the population of core municipalities is much lower in second-tier than in primate urban regions. This is even more the case when a spatial scale larger than the FUA is considered, but it does add precision to the results of the preliminary analysis in chapter 5, which suggest that the core cities of second-tier urban regions, despite being the historical and/or economic centres of the wider area, are not particularly entitled to speak on behalf of the population of the urban region, and have an added incentive to pursue the upscaling exercise proposed by the concept of metropolisation.

Besides being much larger, the core cities of primate urban regions also absorb urban functions to a greater extent than in second-tier urban regions, which show a more distributed proportion. Although the overall distribution of population is also different, the issue here is whether, for the daily life of *any* inhabitant of the urban

region, regardless of residence, the relevant urban functions tend to be centralised in a core or distributed across the region. The share of top-level functions in primate core cities is 72.6% against 49.0% in second-tiers. The MUAs around the core cities host a similarly low share of urban functions, a pattern common to both types of city which illustrates the tendency for monofunctional and homogeneous urban settings in the fringes of primate and second-tier cities. The pattern is different at the FUA scale, where second-tier urban regions host a bigger share of urban functions than primate urban regions. The contrast is most striking at the larger BBSR metro area scale: 37.8% of the top-level urban functions of second-tier urban regions are here, against only 14.6% in primate urban regions. These results are broadly in agreement with the preliminary findings of chapter 5, with the caveat that the FUA results are not as impressive here as that previous analysis suggested due to the consideration of the larger BBSR scale. It also means that Porto, Bristol and Antwerp are arguably better endowed with important urban functions at the FUA scale (which includes here the secondary MUAs) than the average second-tier urban region in Europe. This adds another argument to their appropriateness as detailed case studies for the study of metropolisation.

The analysis confirms that, on average, the wider urban region in second-tier cities is more populated and better served by important urban functions. Places far outside the core city are able to host functions of metropolitan scope whose existence is justified by the need of serving the wider urban region – although the absorptive capacity hypothesis above suggests that the weight of these functions may still grow as it is restricted by the lower capacity of second-tiers to fully exploit their urban region scale. By contrast, primate cities project an agglomeration shadow over the surrounding region, and despite relatively high shares of population in the MUA, FUA and wider metropolitan area, these areas are very thinly occupied by top-level functions. The tendency for important urban functions to be attracted by other important functions and congregate in a few selected locations (Hohenberg, 2004; Hall, 2006) is shown to be stronger in primate cities.

Considering the different functional categories (now including political-administrative, tourism and transport functions, seen in models 3-11 as indicators of network embeddedness, but obviously with a physical location, which is the focus here), we see a consistent pattern. Functions are more concentrated in primate than in second-

tier core cities in all categories. Transport is the only category where primate cities give up some dominance in favour of the immediate MUA and FUA scales, probably due to the presence of airports outside core cities.

### **6.3 Discussion and conclusions**

This analysis sustains the more general argument in the literature that second-tier cities should be seen as a specific research and policy category that should be approached in more differentiated and meaningful ways to allow for a more nuanced and elaborated understanding of cities (Connolly, 2008; Hodos, 2011). Here, it was shown that they substantially differ from primate cities in functional terms. This does not just concern the presence of urban functions, but also their spatial distribution over the urban region. Four main conclusions can be drawn from the analysis. First, it established that there is a substantial ‘primate city bonus’: a clear surplus of urban functions in primate cities which cannot be explained by their size or network embeddedness, but only through their privileged status in national contexts. Second, this bonus does not differ substantially for primate cities in monocentric or more polycentric national urban systems. However, second-tier cities do perform better in more polycentric countries, implying that national-level polycentricity seems more competitive. Third, primate cities are much more able to exploit the size of their urban region to gather and sustain important functions that build upon this scale, while second-tier cities are not equally able to draw on the support base of their wider region to boost their functional performance. Fourth, primate cities are more hegemonic and centralised, having an overall surplus of urban functions but leaving their urban region relatively underserved, casting a so-called functional ‘agglomeration shadow’. By contrast, second-tier cities have a weaker capacity to centralise functions and define the arrangements of the whole urban region: their more modest functional set is much more spread over a wider area.

This has important consequences for territorial development strategies. Lacking the ‘primate city bonus’ and absorptive capacity of primate cities, but having a functionally well-served urban region, provides second-tier cities an opportunity to capture a larger and more diverse array of urban functions through stronger integration

at that scale. This would allow them to compete better with primate cities, in terms of attracting population and investment, and serve better their firms and households. Given the lack of individual places covering the whole functional range, these spread out functions may be more complementary than redundant, creating a greater sense of interdependence and more linkages across the region. For second-tier cities, this potential often goes beyond their current labour market area, proxied by the functional urban area, suggesting the relevance of integration with their wider metropolitan area, as defined by the BBSR report, as this is where an even larger potential to borrow functions and performance lies. This finding corresponds with early ESPON observations (ESPON/1.1.1, 2005) about the potential gains of ‘polycentric integrative policies’ in European urban regions. Those gains were also seen to be greater in medium-sized cities than in hegemonic primate cities, for which capturing the scale of the surrounding urban region would add little to their already dominant position. But this analysis shows, in addition to this earlier study, that the increase in size detected by ESPON is matched by a similar increase of urban functions. Based on the notion of the ‘consumer city’ (Glaeser et al., 2001; Markusen and Schrock, 2009) and of urban regions defined as sites of key economic functions (Göddecke-Stellmann et al., 2011), the analysis here assumes that urban functions are a better indicator than population growth of the potential incentives for integration policies, and, by doing so, it contributes to a new and promising aspect of the agglomeration shadow vs. borrowed size debate. This implies that there is a greater incentive for integration in second-tier urban regions, where individual centres are functionally ‘weaker’ and incomplete and important urban functions are both rarer and more spread out, than in the functionally favoured, all-encompassing primate cities, where “*the hyper-centre has created a hyper-periphery.*” (Domingues, 2009:30).

### *Territories of metropolisation*

It is important to note that the share of key urban functions in places outside the core city renders the ‘city’ vs. ‘hinterland’ contrast particularly obsolete in second-tier urban regions. This addresses the concerns by Sieverts (1997), Brenner (2014) and Harrison and Heley (2015) about how the ‘urban’ should not be restricted to a set of predefined centres but rather recognised (and planned) at the full scale of the territory. Indeed, as much as

the presence and access to urban functions is an indicator of 'cityness', improved economic prospects and urban attractiveness, such features are more evenly distributed in second-tier urban regions. While earlier descriptions of the new territorial scale of cities have referred to a 'regionalisation of the city', seen as a city dispersing into a loose urbanised region, second-tier urban regions may be closer to a process of 'citification of the region', in the sense that a previously unconnected set of urban entities consolidates into a larger, more equipped and emergent extensive city, and the features formerly associated with a selected set of spaces within the urban have now expanded and been rebuilt at the scale of the urban region. Of course, the different ability of smaller centres to attract and retain important functions reminds us that the 'extensive city' is not isomorphic and that the ways in which this 'even' distribution is shared among places in the region may influence their willingness to cooperate in a larger framework.

#### *Concerns for future research*

The argument above implies that understanding how the functional structure apparently shared by second-tier urban regions across Europe takes shape at the intra-regional scale of specific case studies is an important path for future research. This analysis suggests two particular concerns for further investigation.

A first important point is that, as seen in chapter 5, there are important differences in the spatial organisation of second-tier urban regions. Some places are characterised by extensive urban dispersion across large areas, with few clearly defined morphological cores, while others manage to contain dispersion and are organised around a set of separate urban centres. Important urban functions are major aggregators of people and activities. They occupy large amounts of land, attract the development of other functions, and have an impact on infrastructure. So, especially in the case of second-tier urban regions, it is important to ask if they tend to locate in consolidated secondary centres which follow the trend to 'borrow size' discussed above, or rather in remote locations in the functional urban area, away from any defined morphological core. Urban functions tend to trigger development around them, especially in the latter case, where they are less served by other urban amenities, housing and public transport. This is

related to the notion embedded in metropolisation of urban life potentially emerging at any point of the territory and has a major impact on planning options, namely concerning infrastructure. Recall that the strategic plans for Milan by Balducci et al. (2011) and for Zurich by ETH Basel (2010) are based precisely on this idea.

A second important issue is whether the set of urban functions used in this analysis is as relevant for second-tier as for primate urban regions. The focus of the BBSR study on 'top-level' functions may not only create a bias for core city locations, but also imply that the incentive to capture more such functions is not as important for second-tier urban regions as the analysis suggests. Therefore, interesting findings can emerge from a comparison between primate and second-tier urban regions, which accounts for functions especially important for the latter. Such functions may be below the radar of the BBSR database. Research has shown that, for example, political headquarters and international finance tend to be absent from second-tier cities (Hodos, 2011), but they tend to excel in selected areas of the consumer services sector, such as higher education and health care. The so-called 'eds and meds' have been considered especially important due to their preference to less congested mid-sized cities, the jobs they create (Adams, 2003; Hodos, 2011) and the growth of both industries in the last decades (leading to arguments about the end of their 'boom'; see Florida, 2013). Therefore, new research may be interested in comparing the overall presence and spatial distribution of these functional sectors, where the incentive of second-tier urban regions to capture more functions through integration can be argued with more certainty.

### *Final arguments*

The demands for further research stress the fact that the processes of integration in second-tier urban regions are never as straightforward as it may seem given the potential benefits. Research has suggested that 'polycentric urban regions' lack the leadership and unifying power of a leading city to pursue integration strategies. On the other hand, urban regions around a single dominant city share a perception of excessive dependence on core city functions and jobs and may be more willing to strive for greater autonomy than to engage in integration strategies where they do not anticipate many gains.

The findings show that, while second-tier urban regions are still anchored by a clear 'leading city', smaller centres tend to be more than satellites to the core and complement its functional offer. This brings their structure closer to Champion's 'incorporation mode' (2001), in which the functional, economic and, arguably, political relations between centres are different from those in the 'centrifugal' and 'fusion' modes. Therefore, the relations between the different parts of second-tier urban regions and their ability to engage in integration may be shaped in a way that retains the advantages of having a clear leading focus, but does not force other places into a hierarchical structure where the perception of the role played in the urban system and the potential for joint gains is necessarily unbalanced. The following chapters will take complementary perspectives to check whether the incorporation mode is indeed closer to second-tier city development and how this can shape specific forms of integration.

To continue this exploration, an important question emerging from the analysis is whether the common features of the functional structure of second-tier urban regions are matched by similarly common patterns in other aspects of their configuration, such as the socio-economic, historical-demographic and institutional features analysed by the remaining chapters. The arguments discussed earlier that, on one hand, urban functions are an important factor of urban attractiveness for people and firms, and, on the other hand, they tend to settle in locations where they can build upon the size and diversity of activity around them, lead to the hypothesis that there may be specific patterns of socio-economic aggregation of population in second-tier urban regions which are unlike primate urban regions. The preliminary findings about the demographic distribution, namely the proportion of people living in secondary centres or elsewhere in the functional urban area, support the idea that the mutual relations between the core city, other centres and the overall urban area may share some characteristics in contrast to primate urban regions. To explore this further, and discuss how far the detected configurations provide the ground for a metropolisation process, the next chapter will analyse in greater detail what type of large scale socio-economic structures are present in second-tier urban regions, namely by comparing them to their respective capitals and checking whether common contrasts can be found between both types of urban region.



## CHAPTER SEVEN. Patterns of difference in the socio-economic configuration of primate and second-tier urban regions

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The findings of the preceding chapter defined a region of shared characteristics of second-tier urban regions, regarding their functional structure in comparison to primate urban regions. The results allow the formulation of an important hypothesis, related to the core arguments of this research: the differences between second-tier and primate urban regions are visible across different national contexts and, despite place-specific factors, such as institutional strategies and planning policies, they define a common pattern of contrasts between both types of urban region. However, a question emerges whether the functional differences detected find correlates in other aspects of the structure of urban regions. In other words, are the distinctive features of second-tier urban regions also visible in their spatial, socio-economic and institutional configurations, as well as in their historical trajectory of development? This is an overarching research question of this study. Analysing the socio-economic dimension of these configurations is the purpose of this chapter.

As explained in the methodological discussion, the sequentially-designed research now focuses on a comparative analysis of the three main cases studies, Porto, Bristol and Antwerp, namely through the direct comparison with their capitals, Lisbon, London and Brussels. These large urban regions are more commonly associated with a ‘metropolitan’, monocentric-to-polycentric development mode, at least until the second half or the 20<sup>th</sup> century (Font, 2004; Mogridge and Parr, 1997; Boon et al., 2002) and will provide clear insights about how much second-tier urban regions are individually different from their capitals and whether a pattern of contrasts can be found across different European

contexts. The next section will briefly summarise the relevance of this analytic aspect and how it links with the previous chapter. Then, section 7.2 analyses the datasets presented in the methodological chapter to discuss the patterns of spatial distribution of socio-economic groups in the three pairs of urban regions. Section 7.3 conducts some further analysis and looks in greater detail at the contrasts between secondary centres in primate and second-tier urban regions. The remainder of the chapter summarises the findings, questions their meaning for the arguments of the thesis and suggests hypothesis linking them to longer term trajectories of formation of second-tier urban regions, thus setting the scene for chapter 8.

### **7.1 Why an analysis of socio-economic configurations?**

The socio-economic configuration of urban regions is understood here as the aggregation of specific socio-economic categories of population in particular locations, observed through geodemographic techniques (Singleton and Spielman, 2014). Like the functional structure, this is likely to be different in regions whose development and configuration has been defined by centrifugal forces emanating from a dominant core city, and in places with looser and more fragmented spatial structures. Indeed, Champion's three-tier typology for the development of urban regions (2001) argues that in urban regions that have evolved through an 'incorporation' rather than a 'centrifugal' mode, alternative centres beyond the core city are likely to become more than satellites to the centre, hosting more jobs and services and providing a more encompassing and diverse economic milieu to their citizens and firms. Lacking the overwhelming attractive pull of a dominant city placing them into a hierarchical core-periphery relation, they are more able to retain their historical role as self-standing centralities, attracting urban functions, people and activities in a way that the centres emerging from centrifugal growth do not. This can result in a more diverse and heterogeneous pattern of aggregation of population at smaller scales, as people and firms are served by jobs, services and amenities in different parts of the urban region rather than in a single core.

By contrast, primate core cities, whose intensive and centrifugal expansion processes have overridden the socio-economic specificity of smaller centres, are more

likely to have defined a socio-economic hierarchy at the urban region scale. This hierarchy may be visibly organised in successive 'rings' of socio-economic typologies around the core, as in the 20<sup>th</sup> century models first defined by the Chicago School, or be more spatially fragmented and complex, but the hypothesis is that their structure reflects the nature of the centrifugal mode of development (Champion, 2001). This can be visible in the prevalence in specific places of socio-economic types and forms of urbanisation usually associated with the 'suburbs', e.g. in terms of population density, qualifications, lifestyles or type of housing; and also in the way that large areas of the urban region, regardless of the small individual centres within them, are broadly dominated by single typologies, whose territorial reach reflects the scale and intensity of core city expansion.

The findings about urban functions in chapter 6 support this hypothesis. The presence of many and diverse urban functions, particularly consumer amenities, has been associated with higher population growth rates, as people are more willing to live in these areas to enjoy the existing amenities (Burger et al., 2015; Clark et al., 2002; Markusen and Schrock, 2009). But this tendency holds best for the higher-educated fringe of the population (Lee, 2010; Gagliardi and Schlüter, 2015), suggesting that the socio-economic sorting of the metropolitan population changes according to the pattern of distribution of urban functions. The reverse is also true, as important urban functions are likely to aggregate where they can find a larger and more diverse customer base, despite the competition emerging from proximity (Mulligan, 1984; Glaeser et al., 2001; Burger et al., 2015). Therefore, it is important to explore the socio-economic dimension of the configuration of second-tier urban regions in relation to the previous analysis of their functional structure. Chapter 6 shows that primate urban regions are characterised by an overall greater presence of urban functions and a tendency to congregate those functions at the core, exploiting the urban region scale to support their size but leaving the surrounding territory functionally dependent and underserved. By contrast, second-tier urban regions host comparatively fewer functions overall and are less able to exploit the larger scale to serve the core, but important functions are much more distributed across the territory and core-periphery contrasts are less visible, with smaller centres 'borrowing size' from the urban region to host more functions. Given the relation

between urban functions and demography, it is likely that the socio-economic distribution of population in those urban regions shows a bias towards similar patterns.

This plays a role in the prospects for integration of urban regions. The findings about the functional structure suggest that, as highlighted by the concept of metropolisation, second-tier urban regions are closer to the 'extensive city' condition, with urbanity emerging at any point of the territory rather than in selected centres. This is particularly relevant, as the BBSR database used does not focus on functions normally pertaining to 'suburban' or 'peri-urban' locations, such as shopping centres and logistics parks, but on activities associated with 'urban centres', namely high-end consumer amenities and services (see the range of functions considered in Göttsche-Stellmann et al., 2011). If the socio-economic configuration of second-tier urban regions does respond to that functional structure, the underlying conditions to pursue integration strategies change, namely by not being restricted to a hierarchical relation of dependence from the core and by the existence of greater socio-economic heterogeneity at smaller intra-regional scales. This arguably influences local housing and job markets and the distribution of economic opportunities and investment, which in turn shapes the institutional and socio-cultural relations between the different parts of the urban region.

This reminds us again of the importance of analysing urban regions from multiple perspectives. Chapter 3 has discussed at length the concept of 'territorial isotropy' to argue that morphological, functional, socio-economic, demographic or administrative perspectives do not necessarily reflect the same processes and relations (Hall and Pain, 2006; Meijers et al., 2012). There is no automatic isomorphism across these dimensions and this is why urban regions which look similar on a map have different commuting flows, accessibility to services, and levels of integration. In other words, when exploring the potentials of integration in urban regions, it matters to specify the morphological, functional, socio-economic and political territories where they occur. The use of a socio-economic lens, in particular its spatialisation through geodemographics, is a way to gain insights on the relations between this dimension of the empirical analysis and its underlying spatial, demographic, functional and institutional patterns. In more practical terms, it also takes advantage of very recent and detailed data comparing urban regions from this perspective, both in Portugal and the United Kingdom.

## 7.2 Research approach and findings

This chapter will explore the spatial distribution of socio-economic typologies of population in three sets of European second-tier and primate urban regions: Porto and Lisbon, Bristol and London, and Antwerp and Brussels. This will be done by analysing geodemographic data synthesised by the respective national statistical offices, or by aggregating existing indicators when such a synthesis could not be found. As explained in chapter 4 (methodology), the data for Porto, Lisbon, Bristol and London comes from the socio-economic classifications developed from the national census and their respective mapping according to their prevalence in specific statistical subsection of the territory (INE, 2014; ONS, 2014). A comparable study for Antwerp and Brussels does not exist, and a proxy was obtained by aggregating different indicators mapped at the municipality level by the Belgian statistics office (StadBel, 2014). The results for the Belgian case are therefore less precise and direct. The analysis inquires first on the relative presence and location of socio-economic typologies of population in the urban region as a whole, and then on the specific configuration of smaller centres (for the reasons, specified, the latter was not possible for Brussels and Antwerp urban regions).

The compatibility of the Portuguese and British methodologies is not total, but the models are sufficiently similar to allow meaningful comparisons. The main features of the six socio-economic categories of the Portuguese study are summarised in table 7.1. Indicators where no result is given display mixed trends and were not considered representative to construct that particular category. Table 7.2 then summarises the features of the ‘supergroups’ as defined by the ONS for the UK context and identifies the best correspondences with the Portuguese model. Note that commuting is not considered in the ONS definition, leaving only seven potential matches.

CATEGORY (PT):	Population age	Tenure	Housing type	Qualifications
Consolidated urban	<i>older</i>	<i>rent</i>	<i>flats</i>	<i>higher</i>
Qualified (sub)urban	<i>younger</i>	<i>buy</i>	<i>flats</i>	<i>higher</i>
Unqualified (sub)urban	-	<i>rent</i>	<i>flats</i>	<i>lower</i>
Integrated low-density	<i>older</i>	<i>buy</i>	<i>detached</i>	<i>higher</i>
Self-contain. low-dens.	<i>younger</i>	-	<i>detached</i>	<i>lower</i>
Immigration spaces	-	<i>rent</i>	<i>flats</i>	-

CATEGORY (PT):	Popul. density	Commuting	Transport	Immigration
Consolidated urban	<i>higher</i>	<i>shorter</i>	<i>public</i>	-
Qualified (sub)urban	<i>higher</i>	-	<i>car</i>	-
Unqualified (sub)urban	<i>higher</i>	<i>longer</i>	<i>public</i>	-
Integrated low-density	<i>lower</i>	<i>longer</i>	<i>car</i>	<i>lower</i>
Self-contain. low-dens.	<i>lower</i>	<i>shorter</i>	<i>car</i>	<i>lower</i>
Immigration spaces	-	-	<i>public</i>	<i>higher</i>

**Table 7.1** – Main features of the six socio-economic groups derived from the 2011 national census in Porto and Lisbon (adapted from INE, 2014)

SUPERGROUP (UK):	Population age	Tenure	Housing type	Qualifications
Rural residents	<i>older</i>	<i>buy</i>	<i>detached</i>	<i>higher</i>
Cosmopolitan	<i>younger</i>	<i>rent</i>	<i>flats</i>	<i>higher</i>
Ethnicity central	<i>younger</i>	<i>rent</i>	<i>flats</i>	-
Multicult. metropol.	-	<i>rent</i>	<i>terraced</i>	<i>lower</i>
Urbanites	-	<i>rent</i>	<i>flats</i>	<i>higher</i>
Suburbanites	<i>older</i>	<i>buy</i>	<i>detached</i>	<i>higher</i>
Constrained city dwell.	<i>older</i>	<i>rent</i>	<i>flats</i>	<i>lower</i>
Hard-pressed living	<i>younger</i>	<i>rent</i>	<i>terraced</i>	<i>lower</i>

SUPERGROUP (UK):	Popul. density	Commuting	Transport	Immigration
Rural residents	<i>lower</i>	-	<i>car</i>	<i>lower</i>
Cosmopolitan	<i>higher</i>	-	<i>public</i>	<i>higher</i>
Ethnicity central	<i>higher</i>	-	<i>public</i>	<i>higher</i>
Multicult. metropol.	<i>higher</i>	-	<i>public</i>	<i>higher</i>
Urbanites	<i>higher</i>	-	-	-
Suburbanites	<i>lower</i>	-	<i>car</i>	<i>lower</i>
Constrained city dwell.	<i>higher</i>	-	-	<i>lower</i>
Hard-pressed living	<i>lower</i>	-	-	<i>lower</i>

PT Consolidated urban	→	UK Urbanites	- similarity 5/7
PT Qualified (sub)urban	→	UK mix Cosmop. + Suburban	- similarity 6/7
PT Unqualified (sub)urban	→	UK Multicult. Metropolitans	- similarity 5/7
PT Integrated low-density	→	UK Suburbanites	- similarity 7/7
PT Self-contained low-dens.	→	UK mix Hard-pressed + Rural	- similarity 6/7
PT Immigration spaces	→	UK Ethnicity central	- similarity 5/7

**Table 7.2** – Main features of the six socio-economic ‘supergroups’ in the 2011 Output Area Classifications and relation to the categories of the Portuguese study - no. of similar trends in seven possible (adapted from ONS, 2014).

### 7.2.1 Conclusions of the INE report for Porto and Lisbon

The more striking differences between Lisbon and Porto relate to the sources and dynamics of the expansion and suburbanisation processes. Lisbon corresponds to the typical process of a metropolitan area evolving into a polycentric urban region in a centrifugal mode: a dominant core city historically supporting expansion spreading over areas with little prior history of settlement; a linear timeline for the emergence of socially differentiated suburbia along the main rail and road transport axes; a strong presence of immigration illustrating both this social differentiation and the greater integration of the city in globalisation processes; and a systematic and progressive transformation of land use from exclusively rural into clearly urban (Ferrão, 2014).

The Porto region experienced a weaker version of these processes, which have been partially diluted in a continuous but slow-moving dynamics of diffuse, *in situ* urbanisation (ibid.). This was based on the local densification and functional diversification of existing urban fragments on generically rural spaces, rather than the expansion of a dominant city onto previously unoccupied land, resulting in a reticular structure rather a hierarchic form of polycentrism (Marques and Delgado, 2014). The process was supported by a dense and 'rhizomatic' road network (Domingues, 2008) serving local mobility needs and geographically dispersed economic activities (small industry, agriculture) mixed with housing, thereby lacking concentrated employment nodes and not generating long commuting journeys between work and residence.

While the full explanation of these differences needs a deeper account of the polycentric and diffuse territorial structure of Northern Portugal, which goes back to medieval settlement patterns, one of the reasons for their permanence until present times is the historical impact of the core city over the region. Cities like Porto, which were less functionally, economically and politically dominant and had less critical mass, may have been unable to cast intensive expansion and relocation processes over their surroundings (Barry, 2000). As such, they were not able to erase the traces of past spatial arrangements across the region and influence their specific dynamics. This relates to the notion of greater permanence of self-standing secondary centres in the incorporation mode of urban region development (Champion, 2001).



The functional differences between primate and second-tier cities become relevant for this matter: the development of the service sector in Porto is feeble and late because the dispersed and small-scale industrial sector, which generated extensive employment across both urban and rural areas, did not congregate to achieve critical mass and act as a massive consumer of services from the core city (Domingues, 1994). But the opposite relation may also be at work: the industry did not congregate because the core city failed to project its own economic agenda and forge ties with the hinterland to exploit its critical mass (Barry, 2000). The capitality effect (Dascher, 2002), focusing the top-level hierarchy of public services in Lisbon, did the rest: unlike the capital, Porto did not congregate sufficient economic power and high-end tertiary urban functions in the core to secure functional centrality and justify the residential spread of population and ensure their commuting, and to support the extended decentralisation processes from larger core cities into smaller centres throughout the twentieth century (Hall and Pain, 2006). As such, the core city had less influence than Lisbon in the structural patterns of the region.

#### *Spatialising contrasts between primate and second-tier urban regions*

While the above has been discussed in the Portuguese case from morphological, historical, institutional and planning perspectives (Fernandes, 2004; Portas et al., 2007, 2012), the INE study is the first to make these contrasts visible and socio-economically meaningful through a direct spatialisation and comparison based on common categories. So the key question is what different arrangements of the socio-economic structures best illustrate the previously known contrasts. Overall, the contemporary differences between these structures in Lisbon and Porto reflect the different routes towards the emergence of their urban regions. Those differences are illustrated by the variable presence of the following socio-economic categories in particular areas of the urban region:

- ‘Self-contained low density’ areas are a ubiquitous connective tissue across the Porto region (52%) but almost residual in the capital (6%). These are areas of low population and building densities, with a generally old housing stock dominated by detached and terraced housing. A fragmented pattern of recent land uses coexists

alongside remains of older, local urbanisation processes often untouched by large-scale suburbanisation dynamics emanating from the core city. Commuting is based on short distances due to the prevalence of local and low-skilled employment, with few functional linkages with the major cores in the region. Due to the low density and the diffuse mobility network, the dominant transport mode is the car.

- Despite the steep decline in the last 10 years, ‘unqualified (sub)urban’ areas are still very significant in Lisbon (21%) but relatively unimportant in Porto (7%). These areas appear mainly at the immediate fringes of the core city and correspond to the monofunctional expansions of the second half of the 20<sup>th</sup> century. The category is characterised by collective housing, with little quality both of dwelling units and public space, and a population with low qualifications and long commuting journeys to distant employment areas.<sup>43</sup> A generally low purchase power makes public transport (mostly buses and suburban trains) the preferred transport mode. Immigration is slightly higher than average.
- The significant presence of ‘immigration areas’ in the capital region (12%) is comparatively residual in the Porto metropolitan area (2%). Immigration areas have a higher proportion of foreign-born population, normally living in relatively dense areas. Other indicators show mixed trends but there is some prevalence of public transport use and rented flats in an older housing stock. This category is not directly related to the topic of the formation of the urban region, but it is a known factor of differentiation between capitals and second-tier cities reflecting their different integration in globalisation flows (Hodos, 2011).

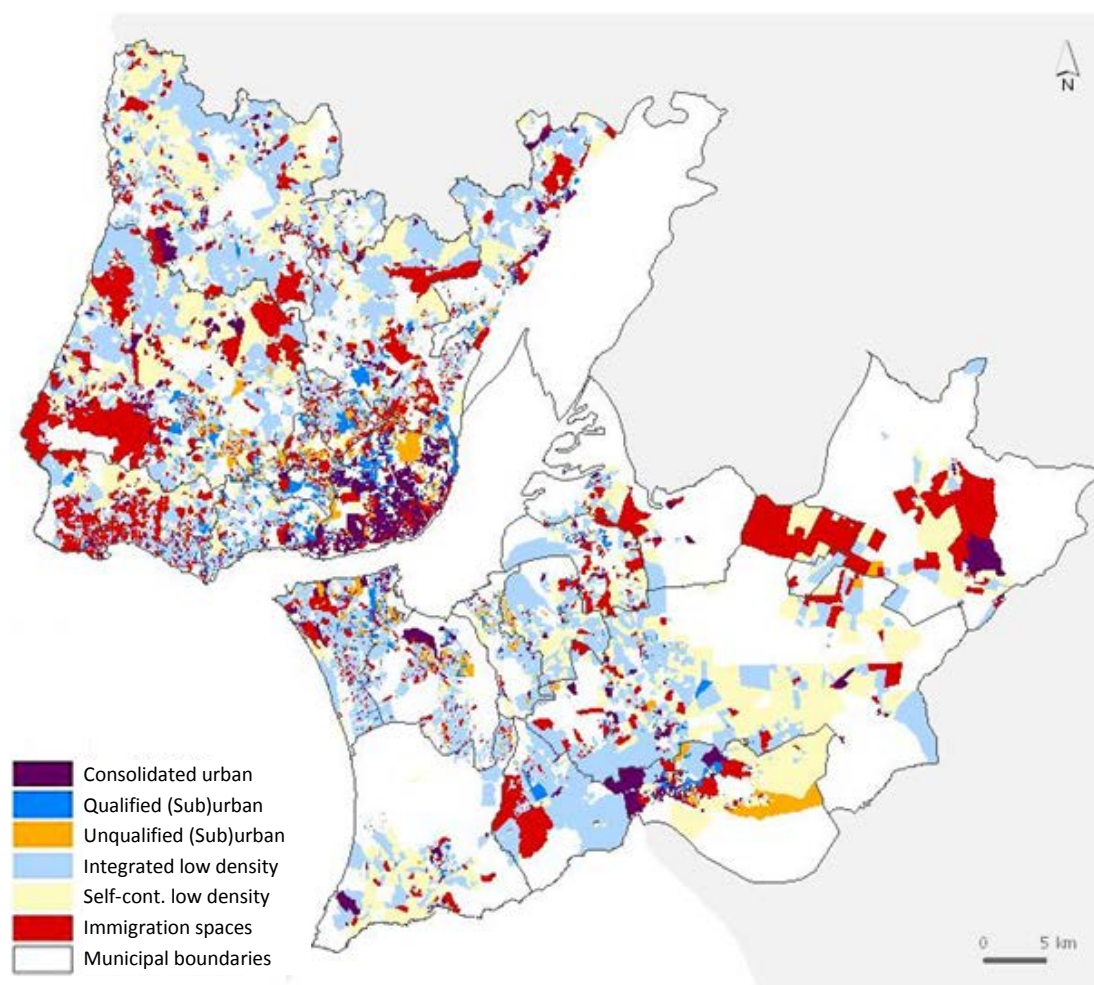
While all typologies appear in different proportions, the three above exhibit greater variation. Table 7.3 below shows the results at the urban region scale.

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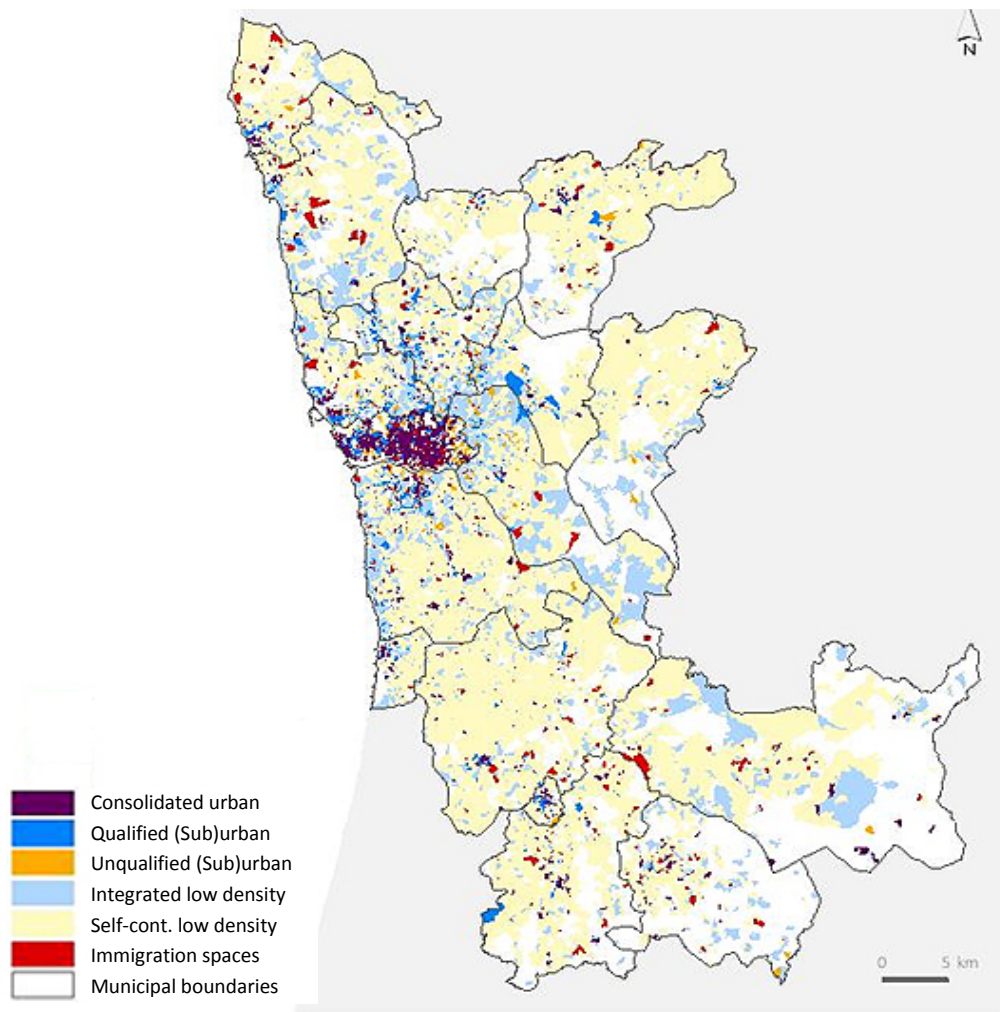
<sup>43</sup> The word “qualified” in Portuguese can be applied both to the academic or professional ‘qualifications’ of an individual or group and to the ‘quality’ of a space or building. A ‘qualified’ urban space is a space that has been given added quality through regeneration and urban design. Therefore, the ‘(un)qualified’ urban areas here refer to the educational level of the population as well as to the quality of urban spaces and buildings.

CATEGORY:	LISBON	PORTO
	Pop. 2.821.876	Pop. 1.759.524
Consolidated Urban	17%	10%
Qualified (Sub)urban	18%	11%
Unqualified (Sub)urban	21%	7%
Integrated low-density	24%	16%
Self-cont. low-density	6%	52%
Immigration spaces	12%	2%

**Table 7.3** – Distribution of socio-economic typologies in the Porto and Lisbon urban regions (by percentage of statistical subsections; source: INE, 2014).



**Figure 7.1** – Socio-economic structure of the Lisbon metropolitan area (INE, 2014).



**Figure 7.2** – Socio-economic structure of the Porto metropolitan area (INE, 2014).

Given the clear differences between the two largest metropolitan areas in Portugal<sup>44</sup>, it matters now to expand the logic of analysis of the Portuguese study to the other two case studies and check whether any similar socio-economic patterns can be found in the comparison between second-tier and primate urban regions. In particular, we can look for patterns of clustering of population in London and Bristol and Brussels and Antwerp that reflect similar structural differences.

<sup>44</sup> Note that the maps above can be misleading, due to the different population densities. For example, the immigration typology in Lisbon (in red) occupies large patches of land, but only corresponds to 12% of the population, while the 'unqualified (sub)urban' (in orange) encloses 21% of population but is not as visible on the map.

### 7.2.2 Spatialising socio-economic configurations in London and Bristol

As discussed above, most socio-economic categories developed for the 2011 Area Classification for Output Areas are rather similar to the Portuguese classification and can therefore be compared, with five, six or seven similar trends out of seven possible (the commuting indicator is not considered in the ONS descriptions). Some correspondences need a mix of two classifications: ‘self-contained low density’ in Portugal is related to ‘hard-pressed living’ in the UK in terms of employment type and qualifications, but contains elements of ‘rural residents’ in terms of geographical location and density; Portugal has arguably fewer older and wealthier rural residents and residency outside dense urban cores often equates to locally employed, lowly qualified populations. Similarly, ‘qualified (sub)urban’ is quite close to ‘cosmopolitan’ in most indicators but has features of ‘suburbanites’ in terms of tenure and car use; daily commuting by public transport of more qualified residents is not as generalised in Portugal as in the UK, specially around London.

Therefore, and given the disparities detected between the Porto and Lisbon urban regions and the matches between the INE and ONS socio-economic categories, these are the questions to ask concerning the potentially analogous relations between Bristol and London<sup>45</sup>:

- Is there a visible difference in the predominance and location of ‘hard-pressed living’ and ‘rural residents’ categories in the London and Bristol urban regions?
- Is the ‘multicultural metropolitans’ category more significant in the surroundings of London (mainly as 20<sup>th</sup> century expansion areas) than in Bristol?
- Is the ‘ethnicity central’ category also more dominant in London than in Bristol?

The table and maps below reveal some answers to these questions and can provide an analogy to the Lisbon-Porto contrasts.

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<sup>45</sup> The urban regions are defined by the ESPON 1.4.3 study (2007) See section 4.3.2 for details.



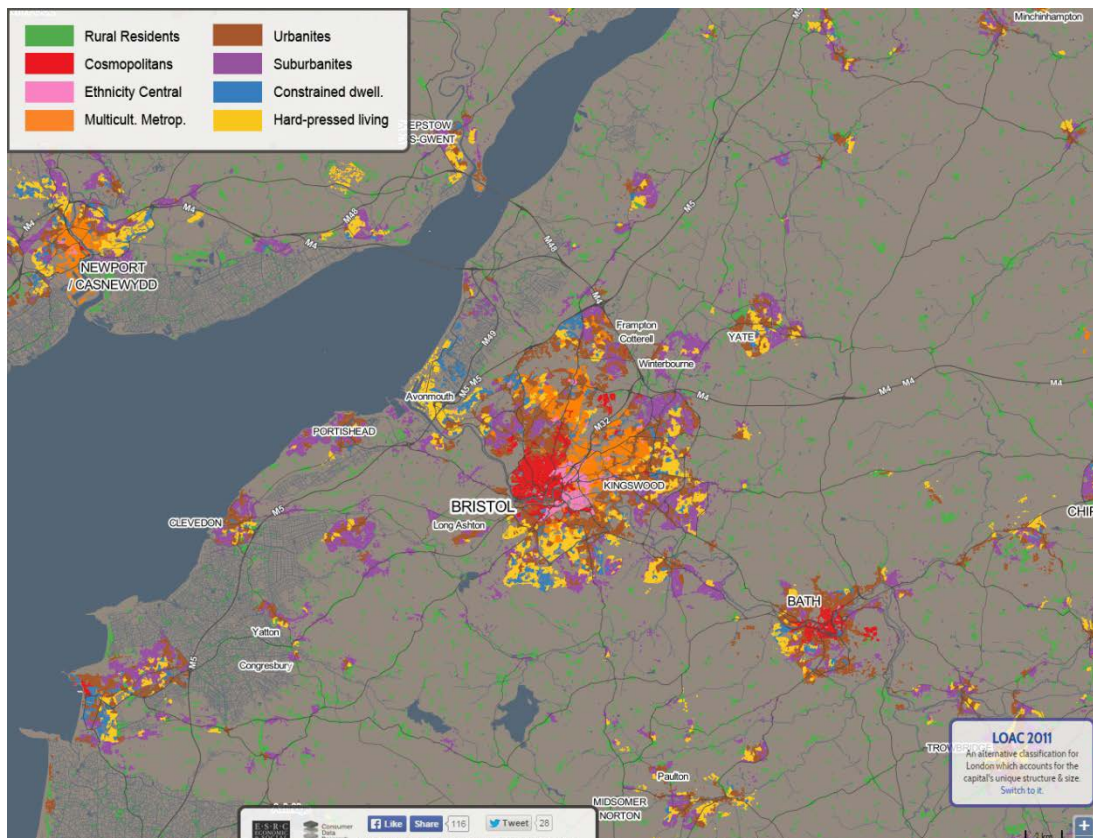


Figure 7.3 – Geodemographic structure of the Bristol urban region (Datashine, 2014)

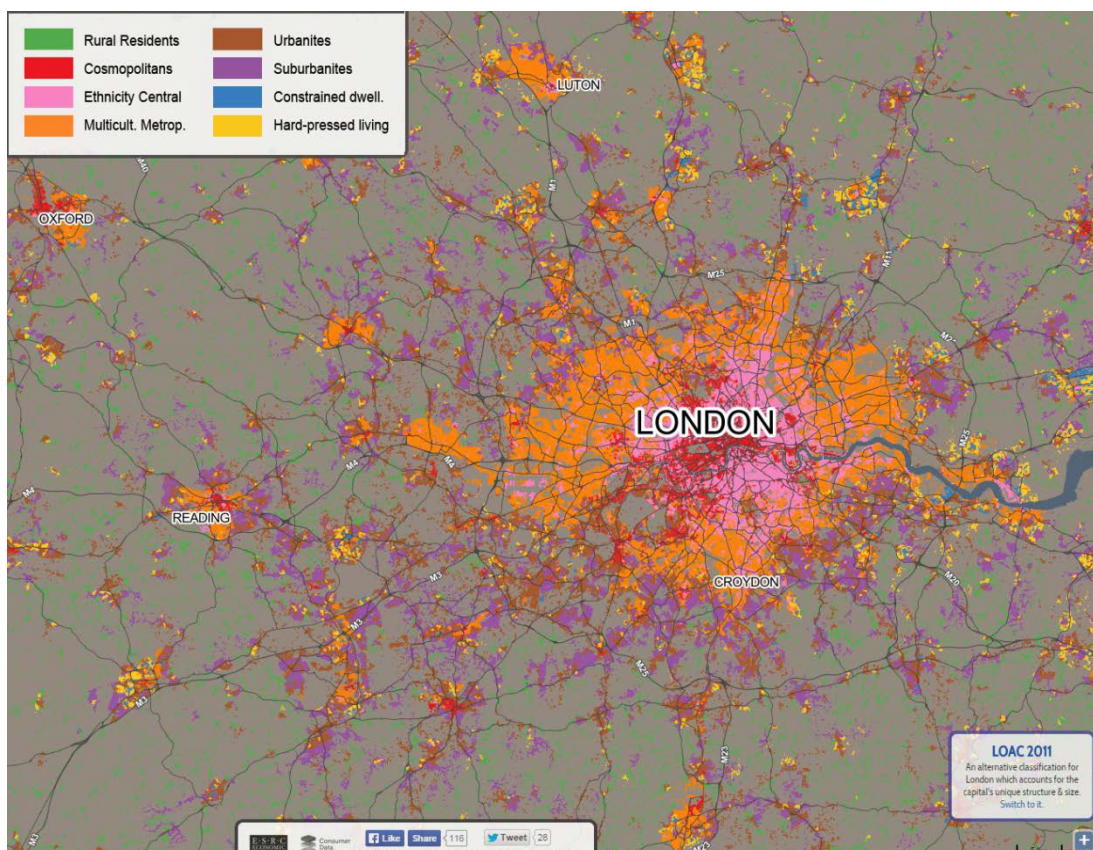


Figure 7.4 – Geodemographic structure of the London urban region (Datashine, 2014)

PT category	UK supergroup	Urban Region (population)			
		LISBON 2,821,876	PORTO 1,759,524	LONDON 13,709,000	BRISTOL 1,041,000
Consolidated Urban	Urbanites	17%	10%	19%	28%
Qualified (Sub)urban	Cosmopolitans + Suburbanites (1/7)*	18%	11%	11%	14%
Unqualif. (Sub)urban	Multicultural Metrop.	<b>21%</b>	<b>7%</b>	<b>23%</b>	<b>9%</b>
Integrated low-density	Suburbanites (6/7)*	24%	16%	12%	17%
Self-cont. low-dens.	Hard-pressed living + Rural residents	<b>6%</b>	<b>52%</b>	<b>10%</b>	<b>22%</b>
Immigration spaces	Ethnicity central	<b>12%</b>	<b>2%</b>	<b>20%</b>	<b>3%</b>
----	Constr. City dwellers	---	---	4%	7%

*Note: The percentage values of the 'suburbanites' UK supergroup are distributed according to how close its indicators are to the 'qualified (sub)urban and 'integrated low density' PT classifications (see above the explanation for the mixed correspondences).*

**Table 7.4** – Distribution of statistical subsections (PT) and output areas (UK) according to their predominant socio-economic category in Porto, Lisbon, Bristol and London (source: INE, 2014; ONS, 2014). The three categories relevant for the analysis are marked in grey.

The immediate conclusion is that the categories exhibiting greater differences between Lisbon and Porto are the same in London and Bristol. 'Rural residents' (green) and 'hard-pressed living' (yellow) together dominate 22% of the output areas in the Bristol urban region, with small and disperse patches of rural residents illustrating the morphology of the older housing stock, less affected by suburbanisation processes emanating from larger centres. These patches appear along the existing pre-motorway road network, in very much the same way as the low-density, detached built-up fabric colonises that reticular network in Porto. 'Hard-pressed living' also appears dispersed across the urban region but dominates in the outer fringes of the main urban cores – population with fewer qualifications, in lower density areas, with predominantly local employment (including agriculture and manufacturing)<sup>46</sup>. The conjunction of both categories does not amount to

<sup>46</sup> While these employment sectors tend to be more dispersed across regions than high-end service sectors, typically aggregated in urban or edge city-type cores, it is unclear whether this corresponds to lower-than-elsewhere commuting needs of the local population, like in Porto. Travel-to-work distance maps at ward level, produced by NOMIS, show relatively long distances

the all-encompassing low-density connective fabric visible in Porto (52%)<sup>47</sup> but their spread and location is similar to the Portuguese case: interspersed with some ‘suburbanites’, they dominate at the urban fringes and outside the main cores.

Like in Lisbon, these two categories are less significant in London when compared to others, and together prevail only in 10% of the most remote output areas in the region (in Greater London they amount to only 1%). ‘Hard-pressed living’ appears much further away from the core city, and ‘rural residents’ are barely visible along existing pre-motorway roads. However, like in the Portuguese case, both are swallowed by larger categories. In London, these categories are more visibly organised around the core, as figure 7.4 shows, with successive and increasingly dispersed rings of ‘cosmopolitans’, ‘multicultural metropolitans’ and ‘suburbanites’ indicating a socially differentiated city-regional structure emerging from a centrifugal expansion process. Albeit spatially more fragmented (due to a historically more permissive planning system, especially outside the core city), the equivalent typologies ‘unqualified (sub)urban’ and ‘integrated low-density’ are also prevalent at different distances from Lisbon core city.

Similarly following the Lisbon-Porto contrast, the ‘multicultural metropolitans’ type (similar to the Portuguese ‘unqualified (sub)urban’, the 20<sup>th</sup> century predominantly residential expansions, with relatively high densities and below-average qualifications and employment) is stronger in London (23%) than in Bristol (9%), where it dominates only at the northern fringe of the core city in the recent expansion areas. Finally, immigration areas are more present in London (20%) than in Bristol (3%). A clear difference between national contexts is that these areas are quite concentrated in central London but much more dispersed across the Lisbon region.

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(15-19 km) both outside and inside the urban cores of the Bristol region, except for the city of Bristol itself. Since the descriptions of socio-economic supergroups produced by the ONS (2014) do not include commuting, an association between semi-rural, low-qualification, low-density areas and more local employment cannot be made in the same way as in Porto. Long travel-to-work journeys seem to prevail, unaffected by the socio-economic category of the population or the urban condition of each setting. By contrast, London shows a more visible ring pattern of increasing travel-to-work distances centered on the Inner London boroughs (NOMIS, 2014).

<sup>47</sup> Note that the visualisation of the maps above can be influenced by the different mapping methodologies in both studies. The Portuguese study plots the dominant category over the geographical boundaries of each statistical subsection with data, while the Datashine project restricts mapping to actual built-up areas.



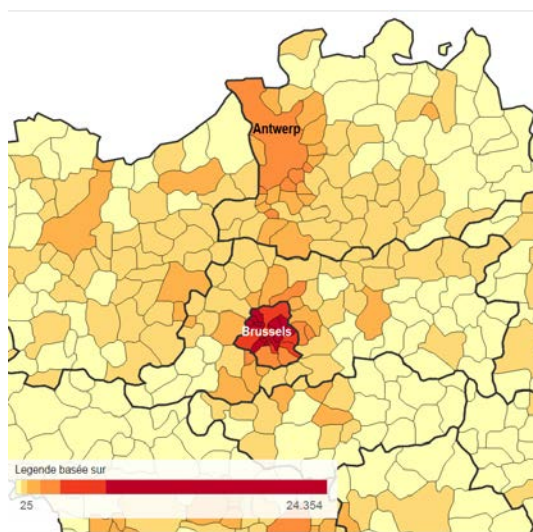
### 7.2.3 Spatialising socio-economic configurations in Brussels and Antwerp

A similar exercise in geodemographics could not be found for the Belgian or Flemish context. Therefore, to contrast Antwerp and Brussels according to the categories used for the other two cases, we have to retrieve and map individual statistical indicators, which are only available at the level of the municipality, making them less precise than the two datasets above. For example, they do not allow us to be sure whether the low-density built-up fabric indeed colonises the pre-motorway road network, like in Porto, or what kind of socio-economic mix emerges in each urban centre in the region. With this limitation in mind, the hypotheses to be tested now for the case of Brussels and Antwerp have been defined above as follows:

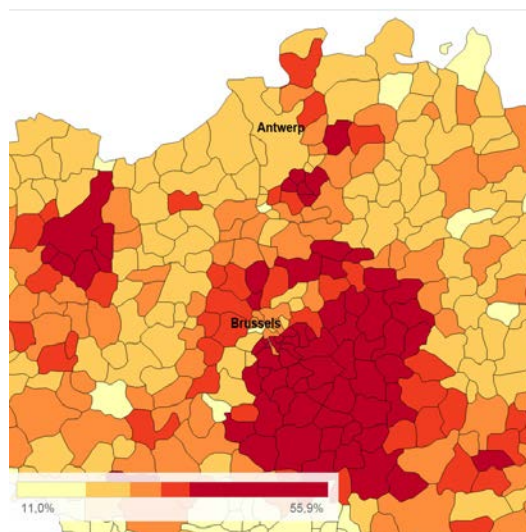
- (1) Second-tier urban regions have more ‘self-contained low-density’ (PT) / ‘rural + hard-pressed living’ (UK) areas than primate urban regions - patchy territories that may be close to the largest urban centres, but are less affected by core-periphery hierarchies, with lower population and building densities, little immigration, lower qualifications, and more local employment with shorter commuting distances (visible in Porto, unclear in Bristol). They appear as a dispersed, connective fabric of varying densities across the urban region and between urban cores.
- (2) Primate urban regions have more ‘unqualified (sub)urban’ (PT) / ‘multicultural metropolitan’ (UK) areas than second-tiers, consisting of higher density expansion areas, predominantly residential, with higher immigration and longer commuting distances; these areas, together with ‘qualified (sub)urban’ and ‘integrated low-density’ (PT) / ‘cosmopolitan’ and ‘suburbanites’ (UK) tend to cluster at increasing distances from the core city, suggesting a socially differentiated and centrifugal expansion pattern of progressive decentralisation.
- (3) Immigration areas are more significant in primate cities and may be concentrated in the core city or dispersed across the urban region.

Figures 6.5 to 6.10 illustrate the following indicators for both urban regions. They were either produced by the mapping tool of the national Census 2011 website (Direction générale Statistique, 2014) or specifically prepared for this chapter with GIS:

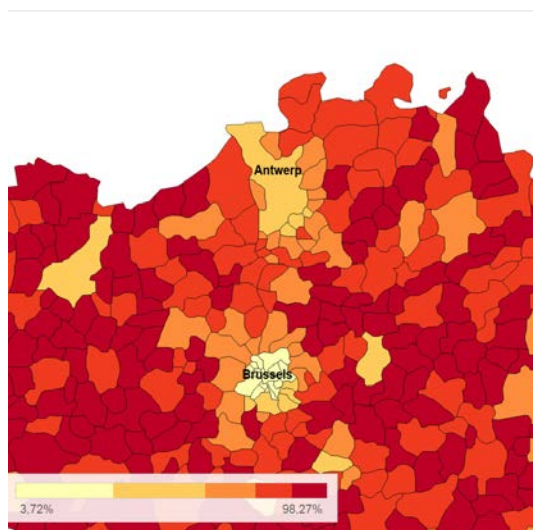
- *Demography*: population density by municipality
- *Qualifications*: percentage of population with a higher education diploma
- *Housing*: detached single-family housing as percentage of existing housing stock
- *Immigration*: residents of foreign nationality
- *Self-containment*: percentage of workers working within their municipality
- *Land use*: residential land use as percentage of built-up land



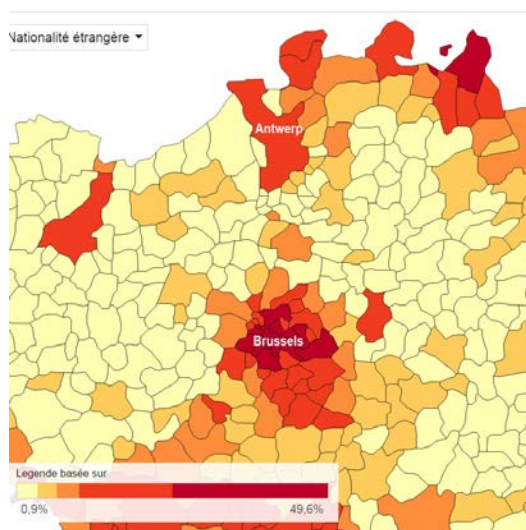
**Figure 7.5** - population density inh./km<sup>2</sup>



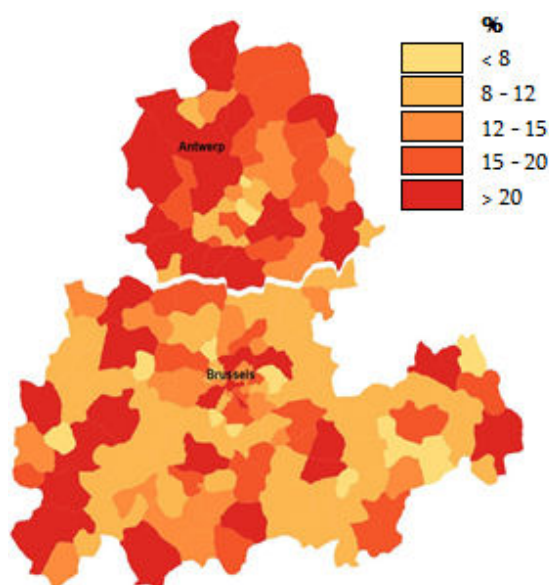
**Figure 7.6** - population with HE diploma



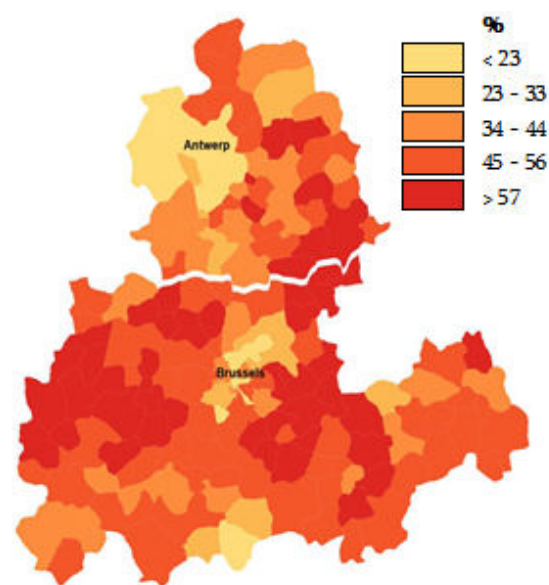
**Figure 7.7** - % single-family housing



**Figure 7.8** - % foreign-born residents



**Figure 7.9** - % work in munic. of resid.



**Figure 7.10** - % residential land use

Unlike the two previous cases, Brussels and Antwerp are neighbouring cities and some structural aspects are common to both<sup>48</sup>. Population density (fig. 7.5) is much higher than elsewhere in Brussels core city but similarly low in the immediate surroundings of both capital and second-tier city. As mentioned before, a pervasive and continuous low-density urbanisation is a typical feature of the Belgian territory since the pre-industrial period, much like the Porto region, and explained by similar reasons (Meulder, 2008; Grosjean, 2010). Nevertheless, other indicators less dependent on the historical permanence of urban morphology suggest the greater proximity of Antwerp to some aspects taken from the other two case studies as typical of second-tiers:

- The low-density areas around Antwerp core city have a population with visibly lower qualifications than the highly educated surroundings of Brussels (fig. 7.6). Note that this does not tell us whether Antwerp (or Bristol, or Porto) has *fewer* skilled workers than the capital as a whole, but rather typifies the geographical clustering of each socio-economic category across each urban region.

<sup>48</sup> Earlier literature has tended to consider both cities as part of the same urban region (Albrechts, 1998; Albrechts and Lievois, 2004; Hall and Pain, 2006, Göddecke-Stellmann et al., 2011), despite some disagreement (GEMACA, 1996; ESPON, 2007).

- In these low-qualified areas around Antwerp, there is a high percentage of detached, single-family housing (fig. 7.7), with low immigration except for the municipalities near the Dutch border (fig. 7.8). By contrast, immigration is very high in Brussels (over 30% foreign residents in the capital region against 9% in the Antwerp province) and is clustered centrifugally around the core city.
- The percentage of detached, single-family housing is also high in the Brussels urban region but there is a more visible 'ring' of municipalities around the core city with less detached housing (fig. 7.7) indicating a denser fabric in those areas.
- The Antwerp urban region may show a slight bias for local employment and shorter commuting, with a higher percentage of people working in their municipality of residence (fig. 7.9) than in the surroundings of Brussels.
- The Brussels urban region has a higher percentage of residential use as part of the built-up land than Antwerp (fig. 7.10), suggesting greater predominance of monofunctional residential expansions of the suburban type in the capital region, against the more multifunctional territory in Antwerp, less altered by intensive core city suburbanisation processes; Flanders in particular has been described as a palimpsest of historic settlement forms "*where industry [...], commerce, residence and agriculture negligently cohabitate.*" (Meulder, 2008: 29).

Despite the lower detail of the analysis and the lack of a tailor-made synthesis similar to the other cases, the socio-economic aspects differentiating capitals and second-tier cities can be summarised for the case of Antwerp and Brussels as follows:

- Some trends suggest that socio-economic groups similar to the '*self-contained low-density*' (PT) / '*rural*' + '*hard-pressed living*' (UK) categories are indeed more present in the Antwerp urban region than in Brussels. This is visible in the indicators showing the geographical setting of lower qualifications, lower immigration, more multifunctional land use and more localised employment.
- Some trends also suggest that socio-economic groups similar to the '*unqualified (sub)urban*' (PT) / '*multicultural metropolitans*' (UK) categories are stronger in the capital region. This is visible in the indicators showing the geographical setting of

higher qualifications, higher immigration, slightly denser urban fabric, higher percentage of residential land use and longer travel-to-work journeys.

- These contrasts are partially masked by the similarities emerging from the proximity of both cities and the overall morphology of the Belgian urban territory. Population and building densities are the most visible illustration of this. While it cannot be excluded, given the less precise analysis, the results do not confirm the claim that Brussels constrained the development process of the urban region in the same way as Lisbon and London, namely that it was able to cast a city-regional hierarchy illustrated by a socially differentiated pattern of population organised around the core city. The historical permanence of local settlement structures seems to be stronger in Belgium, which has possibly counterbalanced the typical processes of intensive core city expansion.
- The proportion of areas corresponding to '*immigration spaces*' / '*ethnicity central*' categories is clearly different in the capital and the second-tier urban region, and even reinforced by the international political role of Brussels. However, the geographical match between immigration areas, single-family housing and higher qualifications indicates that this is a socio-economic type of immigration different from London and Lisbon. These two capitals may be closer to Hodos' argument (2011) that larger and less selective immigration flows, expressing greater integration in globalisation processes, are typical of primate cities.<sup>49</sup>

### **7.3 What happens to other centres in primate and second-tier urban regions?**

From the common pattern of contrasts between primate and second-tier urban regions, it follows that there should be substantial differences between the socio-economic configuration of individual urban centres in both types of urban region, particularly the smaller centres outside the core city. This is important to evaluate Champion's argument (2001) that centres emerging from the incorporation mode will be functionally more

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<sup>49</sup> Hodos does not argue that second-tier cities necessarily have fewer migrants than primate or global cities altogether. However, they have more selective and specialised flows, and are more dependent of domestic migrations, than the large international masses pouring into global cities like London.

autonomous and more attractive than those emerging from processes of centrifugal decentralisation and relocation (either residential or employment-based). But it is also important for the argument that second-tier cities may have both the need to resort to the larger urban region to gather the size, diversity and functions necessary to enjoy the benefits of scale, and the ability to do so in a context of less rigid hierarchies, greater functional interdependence and more balanced patterns of liveability.

In fact, the generally antagonistic debates about what makes ‘cityness’ and why urban agglomerations beyond core cities allegedly lack these features (Sassen, 2005) tell us that there are differences between places which are socio-economically uniform and homogeneous and others whose patterns reflect the greater diversity and mixture of a typical urban setting. Such differences can be visible in the presence of urban functions, quality of life, types of employment and the strength of the identity of ‘place’ (Friedmann, 2010). Cities tend to be more attractive and grow faster when they are served by a larger and more diverse set of amenities and services (Glaeser et al., 2001; Burger et al., 2014), which is both cause and consequence of an equally diverse and mixed assemblage of socio-economic groups living in close proximity (*ibid.*). This mixture, and the institutions and social bonds it creates, is a typical feature of European cities (Le Galés, 2006). Their functional mass and diversity adds to the array available in the urban region and will also benefit the core city, as discussed in chapter 6.

Conversely, places that do not reflect a comparable variety suggest lower attractiveness and, by extension, fewer amenities, services and economic prospects. Even if they do grow in terms of population or income and mask the ‘agglomeration shadow’ by providing locations for specific niches of economic activity, this does not mean they achieve and retain the diversity and attractiveness associated with urban settings. This argument has already been advanced from a functional perspective in chapter 6, namely when discussing the difference between borrowing ‘performance’ and ‘functions’ as two expressions of the ‘borrowed size’ concept (Alonso, 1973; Meijers and Burger, 2015).

Adding the socio-economic dimension to this debate serves to signal that people do live and work in all kinds of places across the urban region, and will have different lifestyles and different perceptions of their urban environment. The fact that Porto, Bristol and Antwerp lack institutional structures governing the urban region scale and

are divided into equally powerful individual municipalities or local authorities stresses even more how similarly designed administrative units cover very different components of the urban territory. In other words, when seen from the perspective of the individual locality, the local socio-economic conditions and the overall pattern may seem quite unbalanced. As chapter 9 will argue, this contributes to the perception of either asymmetrical and unjust or interdependent and balanced relations between places that shape different integration prospects in urban regions.

The question here is whether such contrasts can also be different in primate and second-tier urban regions, strengthening the argument about the different nature and potentials of metropolisation in the latter. To evaluate this, this section looks at the intra-urban socio-economic configurations of individual centres in the urban region, both the central city and others at variable distances from the core, still based on the relative presence of socio-economic groups. This is possible due to the fine scale of the geodemographic analysis of the Portuguese and British methodologies discussed above. For this reason, a similar analysis of Antwerp and Brussels could not be conducted and this section is restricted to Porto-Lisbon and Bristol-London.

For London, the individual centres considered (all classified as individual MUAs by the ESPON 2007 definition) are equivalent to the local authority boundaries, due to their relative correspondence to the actual urban areas in all cases. Since Bristol has larger local authorities containing several towns, the analysis was restricted to the output areas corresponding to individual urban centres. The same happens in Porto and Lisbon, where municipalities have very different sizes. This rescaling was based on population density thresholds. Overall, the secondary centres in each urban region were the following:

- LONDON (8): Slough, Basildon, Reading, Aldershot-Rushmoor, Crawley, Rochester-Medway, Southend-on-Sea, Luton.
- BRISTOL (4): Bath, Weston-super-Mare, Yate, Clevedon-Portishead.
- LISBON (10): Oeiras, Loures-Amadora-Odivelas, Almada, Barreiro-Moita, Seixal, Cascais, Sintra, Vila Franca de Xira, Sesimbra, Setúbal.
- PORTO (7): Gaia, Gondomar-Valongo, Maia-Matosinhos, Espinho, P. Varzim-Vila do Conde, Santo Tirso-Trofa, S. M. Feira-Oliveira de Azeméis-S. J. Madeira.

### 7.3.1 Dominance of a single category in capital urban regions

Perhaps the most striking contrast between the socio-economic configuration of alternative centres in primate and second-tier urban regions is how many urban centres in the former are dominated by a single socio-economic category. The dominant typology tends to be the ‘multicultural metropolitans’ in London and its equivalent ‘unqualified (sub)urban’ in Lisbon. This is precisely the category more related to the intensive, socially differentiated and centrifugal core city expansion, as depicted by the INE description and the ONS pen portraits: predominantly residential land use, collective housing, little urban quality, lower qualifications and purchase power of population and long commuting journeys. It relates to the advancement of high density suburbanisation engulfing territories in the fringes of large core cities, before the more well-off, sprawling and car-dependent suburbs further off into the urban region.

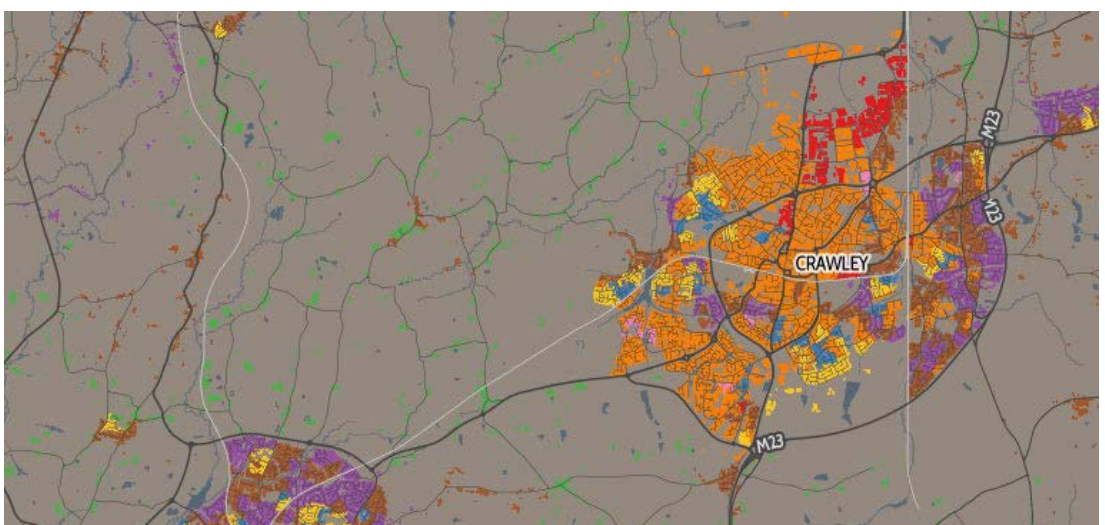
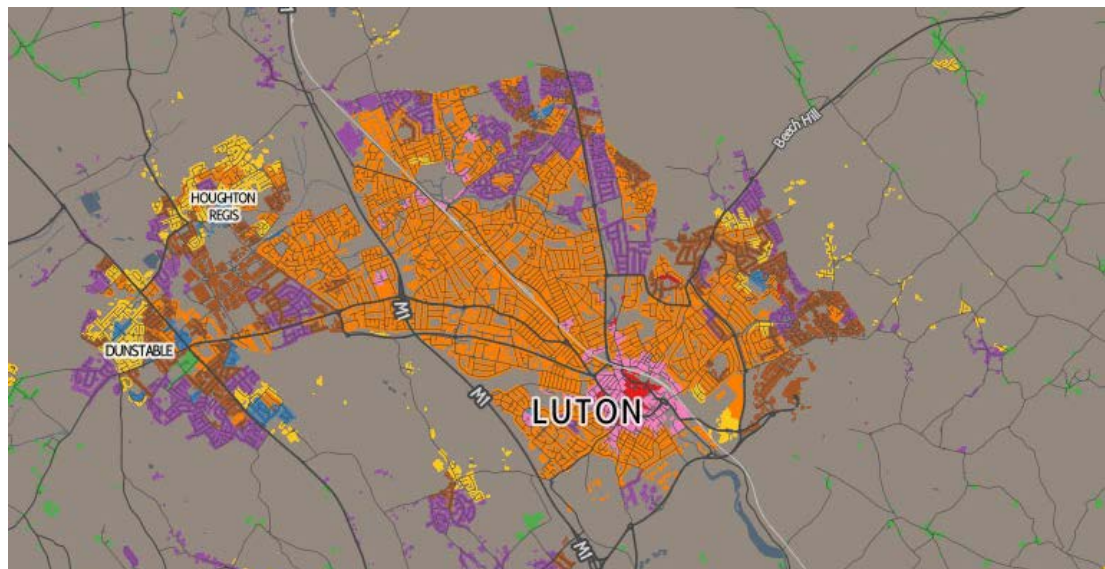
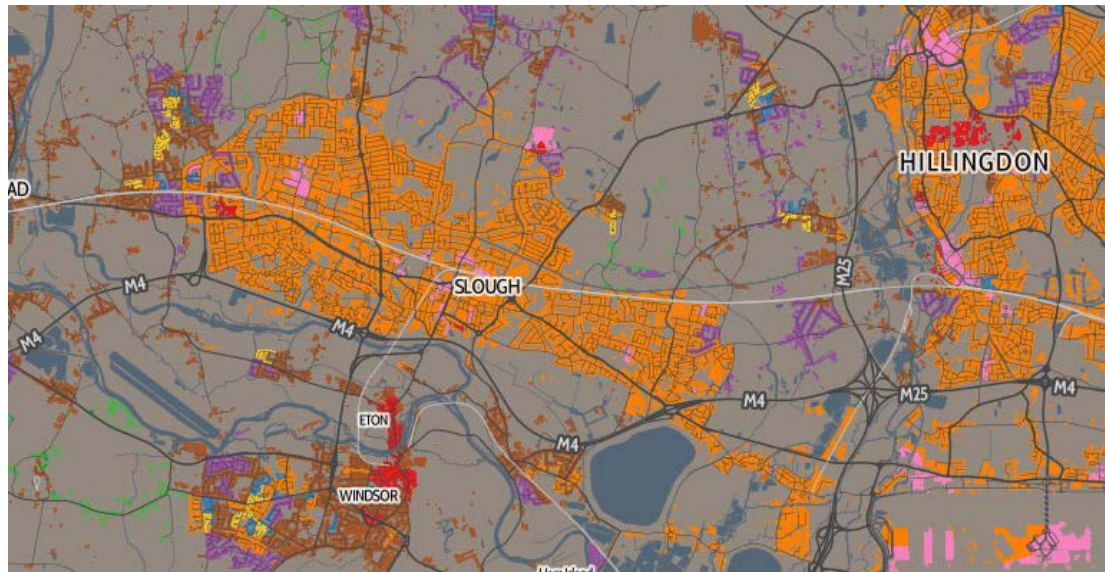
This category dominates in many smaller centres near London, despite their larger population when compared to the centres around Bristol<sup>50</sup>: the ‘multicultural metropolitans’ supergroup amounts to 93% in Slough, 68% in Luton and 55% in Crawley (figure 7.11). Overall, this suggests the role of these London satellites as socially homogeneous ‘dormitories’ generally populated by groups squeezed out of the capital and with little perception of a specific and self-standing urban identity (Stringer, 2014). It also illustrates the argument that smaller towns closer to the core have been swallowed by dominant categories in a centrifugal ring pattern: indeed, a decrease of single-category dominance is clear in the more diverse mix<sup>51</sup> of more remote places, such as Southend-on-Sea or Rochester-Medway, or smaller historic towns, such as Guildford and Windsor. Notably, the way this reflects a socially differentiated core-to-periphery expansion mode is clear even within Greater London: ‘multicultural metropolitans’ prevail in 9% of the output areas in Inner London boroughs but amount to 44% in Outer London.

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<sup>50</sup> Slough has a population of 140,000 and Luton 203,000. By contrast, Bath has 89,000 inhabitants, more than Weston-super-Mare (76,000), Yate (35,000) or Clevedon (21,000).

<sup>51</sup> An interesting feature of London, visible when zooming in to the Datashine OAC maps, is that there is a polycentric replication of the complete socio-economic structure *within* the city – unlike nearby towns dominated by suburban or city-fringe types, Outer London boroughs like Ealing, Bromley or Kingston-upon Thames seem to be small towns in their own right, with urbanites, cosmopolitans and metropolitans mixed again at a smaller scale.





**Figure 7.11** – Socio-economic structure in Slough, Luton and Crawley. Key: same as figures 7.3 and 7.4 (Datashine, 2014)

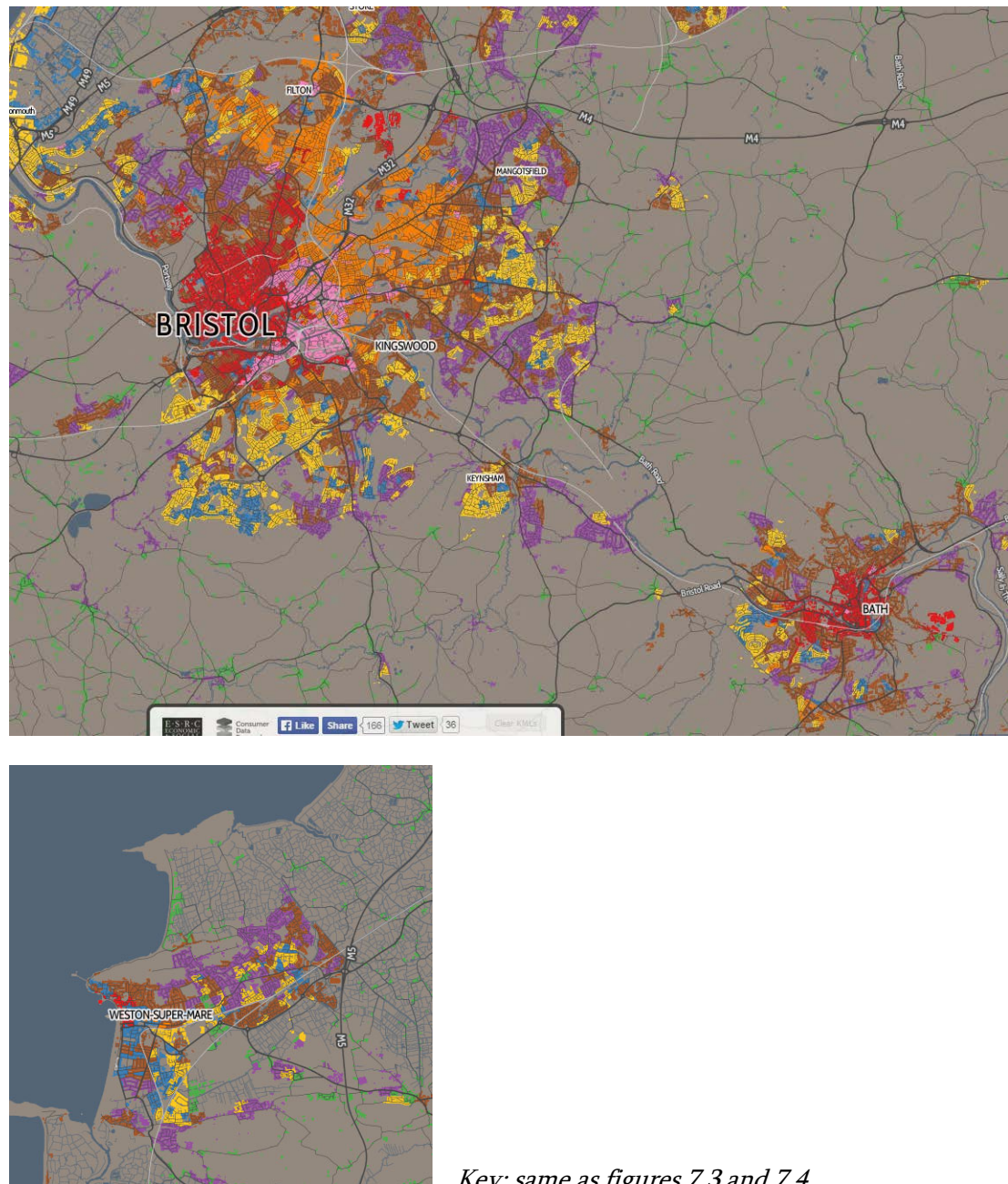
Lisbon follows a similar trend. Moita (49%), Barreiro (32%) and Amadora (29%) have the strongest presence of the equivalent 'unqualified (sub)urban' category, but it is high in many other municipalities, together with the 'integrated low-density' group. The latter is another typically 'out-of-town' category, and its UK equivalent, 'suburbanites', is also quite significant in London sub-centres not dominated by the 'multicultural metropolitans'. Together, the two categories dominate in 91% of the statistical subsections in Moita, 80% in Barreiro and 77% in Seixal, against 10% in Lisbon proper. The only urban centre with a typological mix closer to the core city is Setúbal, a historically important provincial capital in Portugal, now part of the urban region. Unlike London, the relation between single-typology dominance and distance to the core in Lisbon is unclear, reflecting, first, that there are many small centres at similar distances from central Lisbon, and more importantly, the different outcomes of the efforts by municipalities to gradually regenerate their 'unqualified' areas into urban spaces with greater spatial quality and attracting a more diverse social fabric. Overall, the transition from 'unqualified' to 'qualified' (sub)urban represents the strongest structural change between 2001 and 2011 in the Lisbon Metropolitan Area (INE, 2014).

### **7.3.2 Socio-economic diversity in second-tier urban regions**

More than the similarity between the two capital urban regions, an even clearer trend is the contrast to their respective second-tiers. Indeed, the 'multicultural metropolitan' / 'unqualified (sub)urban' category is virtually absent from secondary centres in the Porto and Bristol urban regions. In Bristol, smaller but historically important urban centres like Bath and Weston-super-Mare partly replicate the socio-economic structure of the larger city (figure 7.12), with a mix of categories present in similar proportions and locations: 'urbanites' is the strongest category in all smaller centres as well as in the core city, and categories like 'constrained city dwellers' and 'hard-pressed' appear too. The assumption here is that an urban centrality aggregating most socio-economic categories in a proportion similar to the largest city, has kept or developed its role as a socially diverse and multifunctional community, rather than becoming a satellite of the dominant core. The historical importance and present configuration of Bath, and to a lesser degree, Weston, less changed by the centrifugal expansion of the core city, bring them closer to



Champion's view of centres forming an urban region through an incorporation mode. Nevertheless, this multi-centred replication of socio-economic diversity seems to be quite dependent on size and distance to core: it is more visible in Bath than in Weston, but less in Clevedon-Portishead and Yate. This change is visible in the gradual increase of the 'suburbanites' from 6% in Bristol to 10% in Bath and 30% in Yate.



**Figure 7.12** – Socio-economic structure in Bristol, Bath and Weston-super-Mare revealing similarities in the typological mix and the absence of a dominant category in smaller centres, but an increase of the 'suburbanites' supergroup (Datashine, 2014)

In Porto, the few instances of the ‘unqualified (sub)urban’ type appear mostly in the agglomeration around the core city, but most centres gather less than 5% of this category. Compare this to the values of Lisbon and the equivalent category in London to see how the second-tier city failed to project a large-scale and intensive suburbanisation process over the surroundings. However, secondary centres in Porto also fail to aggregate a mix of socio-economic typologies, like in Bristol, with the ‘low-density self-contained’ spaces taking over a large part of even the most ‘urban’ municipalities. This is because there are not many self-standing towns or cities with sufficient critical mass beyond the aggregate of municipalities around the core city. Like Antwerp, the Porto region as a whole is denser than Bristol due to its continuous and pervasive urbanisation, but it has fewer density peaks and is morphologically less polycentric than Bristol, which shows a clearer pattern of self-standing, dense and separate urban cores.

Nevertheless, the potential for urbanity in these places can be estimated by simply not considering the ‘low-density self-contained’ areas in the measurement (i.e. assuming zero statistical subsections in that category and recalculating the percentages for the others). This exercise removes the bias of the omnipresent diffuse urbanisation in the region and reveals two contradictory tendencies: while the municipalities closer to Porto highlight more their ‘suburban’ condition, with a great increase in the ‘integrated low-density’ proportion (‘suburbanites’ in the UK model), other agglomerations further away from the centre visibly shift to a closer replication of core city diversity, revealing, like in the Bristol urban region, the greater permanence of their historical patterns and greater autonomy from core city centrifugal forces. Naturally, this relates to the predominance of two socio-economic categories more associated with urban centres, namely the ‘consolidated urban’ and ‘qualified (sub)urban’ groups, rather than the more suburban and semi-rural typologies. This is particularly the case of the Póvoa-Vila do Conde MUA to the North (68% ‘urban’ typologies) and the Feira MUA to the South (80% ‘urban’ typologies), both with a low proportion of suburban-type categories.

Such a differentiation could not be found in Lisbon, where the presence and mix of categories more associated with urban centres is kept generally low and more uniform than in Porto, regardless of the size and distance to the core of individual centres. The exception is, as mentioned, the provincial capital of Setúbal.

#### 7.4 Summarising and questioning the geodemographic analysis

This chapter tries to typify a pattern of contrasts between primate and second tier urban regions. The point of the comparison at this stage is to find correlates to the distinctive functional structures of the two types of urban region uncovered in the previous chapter. The use of a spatialised socio-economic lens complements that functional perspective, following the arguments that the spatial configuration of both aspects is interdependent and the distinctive features of one are likely to affect the arrangements of the other. In methodological terms, the use of geodemographics for the spatialisation and visualisation of socio-economic arrangements allows a better understanding of the similarities and differences between cities: while ‘inner city’ areas in different cities may share more common features with each other than with their own ‘suburbs’ (O’Brien, 2014), a geodemographic analysis shows the ambiguities and exceptions to these patterns and allows a more nuanced analysis of the nature of urbanisation in each case study.

The analysis of socio-economic configurations shows that, despite the individual differences between Porto, Bristol and Antwerp, and Lisbon, London and Brussels, the contrasts between each capital and its respective second-tier city follow similar patterns. Alongside the major differences in the presence of immigration, the second-tier urban regions show a greater presence of low density, spatially diffuse and socio-economically mixed areas, with weaker linkages to the main urban centres, older morphologies, a less qualified population and more local employment. These are the areas that arguably suffered less impact of the centrifugal core city expansion. By contrast, the three capital urban regions have a greater presence of dense and monofunctional areas, with greater commuting distances and larger areas of relative socio-economic uniformity. These areas can be more associated to an intensive and socially differentiated decentralisation process emanating from a large core, gradually masking local dynamics occurring in other centres and creating what is mostly a socio-economic hierarchy of city-regional scale. Variations of the intensity of this general pattern can be seen in the fragmented spatial distribution of socio-economic typologies in Lisbon and Porto versus the more organised, sometimes ring-patterned arrangements in London and Bristol. Another difference lies in the apparent greater permanence of the historical low-density urban forms around Brussels against its near-obliteration in the other two capital regions.

Additionally, while in second-tier urban regions there is a greater tendency for smaller centres to keep some socio-economic diversity, normally with a high proportion of categories related to established urban settings and sometimes even replicating the core city configuration at a smaller scale, large capitals tend to turn many of these centres into dependent satellites dominated by a single, uniform socio-economic typology, or a set of typologies normally associated with suburban settings. This is also a general pattern followed by the three pairs of case studies, but variations occur: there is greater heterogeneity between the London region sub-centres, influenced by the distance to the core, than in the Lisbon region, whose sub-centres are more similar overall; the role of city size in supporting this typological variety is more visible in Bristol than in Porto; and, while there are not many self-standing sub-centres of any kind in the Porto region, those further away from the core seem closer to the small-scale urbanity of the Bristol sub-centres than those in the core MUA, more similar to the Lisbon satellites.

Generally, it is possible to claim that the configuration of the second-tier urban regions analysed here is closer to the features of the incorporation mode theorised by Champion (2001). The apparently more rigid city-regional hierarchy of socio-economic differentiation, and the lesser urbanity and diversity in individual sub-centres, situate capital urban regions closer to the centrifugal mode of development. In support of this aspect, it is interesting to note that the small centres around large capitals studied by Phelps et al. (2006) were discussed by the authors as European versions of 'edge cities', but all were towns or cities with a long history of urbanisation, rather than new settlements. Therefore, their condition of core city 'satellites' is not a consequence of being recent outposts of centrifugal relocation and decentralisation, but arguably of a progressive loss of functional autonomy and socio-economic diversity as they are engulfed by urban expansion and drift towards the gravitational field of the core.

The limitations of this analysis, both in terms of scope and depth, raise nonetheless new questions requiring more research: can this pattern of contrasts be extended to other national urban systems, adding another factor of differentiation to those already detected by recent studies (ESPON, 2012a; Göddecke-Stelmann et al., 2011)? Do countries with more horizontal urban systems, such as Germany, equally have urban regions with strongly different arrangements reflecting their different process of formation and

functional distribution and the different role of core cities and secondary centres? And, besides the history of development as theorised by Champion (2001) and the interaction between functional and socio-economic arrangements, what other factors affect the configuration of urban regions? The fact that the geodemographic analysis of the Datashine/BODMAS project covers the whole United Kingdom provides a good opportunity for more comparative work, namely between the English Core Cities.

## **7.5 Conclusions**

The findings of this chapter support and expand the conclusions of the previous one. There are indeed relations of similarity between the functional and socio-economic configurations of urban regions and clear distinctions can be found by comparing primate and second-tier urban regions. The visualisation of two clearly different spatial patterns of socio-economic arrangement supports the association of primate urban regions with a centrifugal mode of growth and second-tiers with an incorporation mode (Champion, 2001). The importance of Champion's corollaries to this idea is highlighted again, as the greater socio-economic diversity retained by secondary centres in second-tier urban regions may indeed produce a more fertile environment for a greater (and more autonomous from the main centre) share of jobs and services (Glaeser, 2010).

This suggests a distinction between cities with a strong impact on the historical development and contemporary configurations of their hinterland, creating and commanding a kind of hierarchic polycentricity, and cities lacking that 'big central' condition, where the very use of the term 'hinterland' as opposed to the 'city' is deceptive. There, the boundaries between the urban, the suburban and the rural, based on a core-periphery structure, are much less precise. The findings show that socio-economic configurations in second-tier urban regions are spatially more heterogeneous and diverse at smaller scales, less obliterated by large areas of uniform typologies associated to central city expansion and more consistent with a functional arrangement in which several parts of the urban region mutually borrow size to retain and support an offer that they would not achieve as isolated centres.

Of course, this is only an asset for the concept of an ‘extensive city’ building upon size, functional mass and diversity and integrated governance, if these areas are well served by services, jobs, housing and transport, and may express a political voice. Knox (1994) and Dieleman and Faludi (1998) write about how an urban region as a whole can have higher living standards and environmental quality if smaller areas form an attractive ‘urban realm’ for their residents’ daily activity. But these areas are often dismissed as the unproblematic and unexamined ‘other’ places rather than alternative forms of the urban (Sieverts, 1997; Vaughan et al., 2009; Harrison and Heley, 2015). Readdressing the theoretical framework of metropolisation, it can be argued that the socio-economic richness and variety, and the potential liveability that can be found in different parts of the territory of second-tier urban regions, signals the existence of such a multiple and complex urban entity. This entity is more than the outcome of a large-scale and socially differentiated hierarchy of urbanisation set out by the dominant cores. Accordingly, metropolisation, as a non-spatially selective framework acknowledging the full scale of the urban as consolidating into a city, rather than a city dissolving into the urban, and arguing for planning strategies that build upon this notion, is an even more important lens for understanding and envisioning such second-tier urban regions.

In this sense, the configuration of second-tier urban regions suggests a different nature of integration processes, beyond being more or less ‘advanced’, as it is often assumed. Admittedly, a strong and centralised socio-economic, functional and political hierarchy at the urban region scale can be easily interpreted as a form of advanced and deep integration. This integration tends to be “*unidirectional; [with] linkages directed at the principal centre; [and] no relationships between centres of similar size*” (Burger et al., 2014: 1922). Conversely, more fragmented and less hierarchic urban regions would be more loosely linked and not as deeply integrated, with semi-autonomous sets of socio-economic and functional aggregations operating at several points of the territory with little perception of an overall structure at the urban region scale.

However, as chapter 9 will discuss, there are risks that the hierarchical form of integration is not as balanced, just and based on symmetrical relations and perception of common gains as it should to be politically successful and represent the interests of most of its actors. Boudreau et al. (2007) write about abandoning the core-periphery



framework of analysis and equating the culture of the core city with the culture of the urban region, “*as there seems to be an emerging political space at the metropolitan scale*” (2007: 34). The functional and the socio-economic configurations of second-tier urban regions point precisely to this greater proximity between the core and the peripheries, and may therefore provide more fertile conditions for an integration process. This shared metropolitan space – the extensive city- has greater chances of success if the different components of the urban region recognise their autonomy and interdependence within the whole, as well as their ability to play a role in the emergence of a larger, more complete and diverse city that does not fully come to life without them.

*Are second-tier urban regions ‘more different’ among them than primate urban regions?*

Even within a region of variability, each urban context depends on a complex mixture of historical contingencies and long-term processes. These are often made more visible by the relative stability (political, hierarchical) of the European urban system, as argued by Le Galès (2006) and Hohenberg (2004). In addition, urbanisation processes have been influenced by a history of planning policies whose traces are visible on the territory: for example, the expansion of late nineteenth-century London along a planned centrifugal rail network can be compared with the relative lack of inter-urban rail linkages in the Bristol region to explain some aspects of their spatial and socio-economic configuration (Felis-Rota et al., 2011). Local constraints and national contexts are as important as generic models for the evolution of urban systems, and both scales are co-constitutive, endlessly nuanced and sometimes deeply altered by each other’s agency (Massey, 1995; Hodos, 2011). As argued earlier, this demands a ‘contextually embedded’ analytic methodology (Brenner, 2001), through which the local and specific help to define a region of variability, rather than a flattened territory to apply universal rules.

However, this chapter suggests that large primate cities have done more than ‘weaker’ second-tiers to reconfigure the development of their urban region and erase the traces of such place-specific structures and dynamics. This relates to their intensive and large scale expansion processes and their ability to constrain strong socio-economic and spatial hierarchies which have not emerged *in situ* from localised processes and agendas.

That power is intensified by a history of political decision-making able to affect a large hinterland (Barry, 2000; Nicholls, 2005) and the stronger intensity of market forces in larger cities in a context of late capitalism (Hodos, 2011). The question is whether this makes primate cities more able to diverge from place-specific trajectories and be more responsive to homogenising processes and global forms of urban expansion (Cohen, 1996), developing more similar spatial structures and socio-economic configurations across Europe, from Lisbon to London, Madrid or Paris. Despite the visible differences they create for themselves in an effort for greater individuality (Zaera-Polo, 1994), they would respond to the same stimuli coming from “*exchanges with external milieus*.” (ibid.: 26), and erase more easily the particularities of their territories.

Second-tier urban regions, lacking such intense forces of erasure and reconfiguration, would have a greater tendency to blend their less intrusive expansion processes with the traces of the past, superimposing new structures on pre-existing particularities. These particularities are formed by specific local contexts – cadastral divisions, infrastructure, morphologies – which play a role in the way new urban forms and functions negotiate their location and people feel culturally attached to places (Font et al., 2004; Lambregts, 2006). While it is unclear whether the different relation of primate and second-tier cities with the forces of particularising permanence and homogenising change does create generally more similar primate urban regions and more differentiated second-tiers, the findings about the socio-economic configuration of the latter justify an investigation of their history of formation. This is the task of chapter 8, which will ask whether second-tier urban regions are indeed more reliant on older territorial features and whether their urban history reflects the hypotheses supported by the functional and socio-economic analyses of the previous chapters.

## CHAPTER EIGHT. Comparing the emergence of second-tier urban regions in Europe: population patterns and urban change 1890-2011

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The findings so far established relations of similarity and interdependence between the functional and socio-economic configurations of second-tier urban regions and defined a set of features that can be argued as specific to them. Such features become more distinctive when they are contrasted with primate urban regions. Earlier research has provided hypotheses about the differences between primate and second-tier cities, but relatively few contributions have expanded this search to the urban region scale and addressed them in a systematic way. This research fills that gap and argues that primate and second-tier cities can be fundamentally different in the way they define the spatial, functional, socio-economic and institutional arrangements of their urban regions. This is important, as the above are four key factors influencing integration processes, and integration is an important development strategy for second-tier urban regions. However, present arrangements have a history behind them. The distinctive features of second-tier urban regions detected so far are likely to correspond to a common mode of development that helps explain the shared features of their functional and socio-economic configuration. The purpose of this chapter is to explore this hypothesis.

Indeed, the hints left by earlier research about the spatial structure of different types of urban region often rely on centralised and hierarchic vs. fragmented and networked oppositions (Heynen et al., 1991; Hohenberg, 2004; Schneider & Woodcock, 2008), and suggest that there may also be differences in their mode of formation. A diachronic analysis of urbanisation trajectories can offer insights that a snapshot of current forms does not provide. Yet, that historical dimension is not often recognised by comparative studies, although it offers greater refinement to the study of urban phenomena: “*sensitivity to the different ways in which particular polycentric structures have evolved is of great help in making sense of the differences one tends to observe between one polycentric region and the other.*” (Lambregts, 2006: 115-116). Each urban system has emerged from a different starting point and changed over time in different ways, often shifting trajectories and blending forms of growth (Solis et al., 2015).

The origins and long-term trajectory of urban growth leading to the emergence of urban regions left behind physical, social and infrastructural traces over which contemporary forms and networks are imprinted. Champion (2001) has insisted that this consideration should become part of the framework of analysis of large and polycentric urban regions today, namely to explain demographic shifts and urban change. But research and policy have not recognised how much history matters for the development of different kinds of polycentric urban regions; one of the outcomes of this neglect, writes Lambregts, was an interpretation among policy-makers of polycentrism as a *“remedy for all kinds of urban and regional problems”* (Lambregts, 2006: 121), with no regard that specific experiences of development have historical and local explanations; therefore, they may be exemplary only for specific types of urban region (ibid.).

The strong contrasts between the functional and socio-economic configurations of primate and second-tier urban regions point precisely at the argument that, in terms of interpreting the opportunities and barriers to development in urban regions, one size does not fit all. Notably, centrifugal, progressive and hierarchic forms of expansion from dominant core cities over hinterlands with little history of prior urbanisation are likely to produce different spatial structures than a mix of undirected and fragmented growth processes, emanating from a leading core but also from several other centres, with greater local divergences and coexistence of contradictory forces. Despite the changes over time and the mixed patterns that characterise most cases, the hypotheses advanced in the previous chapters broadly situate primate and second-tier urban regions in these two models. In terms of their historical trajectory of formation, second-tier urban regions can be closer to the ‘weaker’, non-centrifugal model, following the arguments by Hohenberg (2004) about the ‘central place’ mode of urban region formation around large capitals and the ‘networked’ mode in smaller cities. Of course, this depends not only on the type of core city but also on the nature of the hinterland – the historical role of smaller centres, demographic changes, administrative divisions and forms of governance. These factors interact to add nuance and specificity to the general tendencies hypothesized here.

It should be noted once more that the distinctive features of second-tier urban regions are as likely to depart from the centrifugal, core-to-periphery development mode usually associated with large primate cities, as from the concept of ‘polycentric urban

regions' based on the fusion of similar nearby urban centres. The hypotheses advanced about the structure of second-tier urban regions do not exclude a *leading* city – they exclude a *dominant* city, though. Therefore, an in-between model mixing core city expansion and the merger and densification of smaller urban centres, such as the 'incorporation mode' proposed by Champion (2001), may be particularly appropriate to describe many second-tier urban regions. So, besides answering whether it is possible to identify their common trajectories of formation, in correlation with the configurations detected by the previous chapters, this chapter will also discuss if they broadly conform to such an 'incorporation mode'.

The analysis will explore how the Porto, Antwerp and Bristol urban regions evolved over time. It will use population data between 1890 and 2011, relying on the relation between population change and urbanisation proposed in earlier literature (Mogridge and Parr, 1997; Turok and Mykhnenko, 2007). As discussed in the methodological chapter, this stage of the research is dedicated to observe the similarities but also grasp the peculiarities of each case study, after the more wide-ranging effort to define some overall features of second-tier urban regions (chapter 6) and establish some important contrasts to primate urban regions (chapter 7).

The next section will start by arguing the importance of the historical dimension in studying urban regions and discuss the limitations of existing research in that aspect. Section 8.2 will provide the empirical analysis, mapping areas of early urbanisation, comparing the evolution of population density, observing the emergence of morphological agglomerations and functional urban areas, and evaluating the role of core cities in the growth processes of the larger territory. Section 8.3 will summarise the findings, discuss their bearing on research methods and policy, and uncover some historical similarities in the three urban regions that may help explain them. Section 8.4 presents some conclusions for the wider arguments of the thesis and some potential implications for the institutional environment of second-tier urban regions, which will be addressed by chapter 9.

## 8.1 The different routes towards the urban region

“[The South West region] *is full of rivers and towns and infinitely populous [...]* interspersed with a great number of villages, I had almost said innumerable villages, hamlets and scattered houses [...].” Defoe, cited in Barry, 2000: 81

Chapter 3 started by discussing how urban literature failed to acknowledge that boundless and fragmented urbanisation processes, gradually humanising territories and overriding urban-rural divisions, are in many cases quite old phenomena, rather than novelties of the second half of the twentieth century (Friedmann, 1978; Soja, 2011; Andersen et al., 2011). Observations by attentive travellers like Daniel Defoe, quoted above, or the authors quoted at the beginning of chapter 3, show that, while the scale and scope of urbanisation has definitely changed, the seeds of erratic and continuous urbanisation were in place well before much urban literature is ready to accept. This gap is related to what Brenner has called “*methodological cityism*” (Brenner, 2014: 15), a tendency of research to focus on the development of core cities and their outward expansion and disregard the remaining territory.

Indeed, the further we go back in time, the more difficult it becomes to tell the story of territories outside core cities. Data is scarce, mapping and imagery are not accurate, and the history of their *urbanisation* falls outside the proper history of *urbanism* (Grosjean, 2010). Such territories were not, until recently, sufficiently problematised by the discipline of urban studies. To start, urbanisation outside the accepted limits of core cities lacked proper planning and therefore an interpretative framework as a (proto-)urban setting. Mapping such places was more the concern of military authorities than urban scholars. Only in the twentieth century has the problem of urbanisation been applied to the territory as a whole, which led to assumptions, still present today, that places outside core cities are a ‘recent’ urban problem only because they appeared recently in the field of urban studies (Grosjean, 2010). As discussed earlier, this led to a notion of ‘default’ urban growth as a city expanding over an assumed and unproblematic spatial-historical void, which was gradually occupied by ‘suburbs’, equally

perpetuated as theoretically generic, historically unproblematic, and devaluated as something lesser than 'the city' (Phelps et al., 2006; Vaughan et al., 2009).

The outcome of this 'methodological cityism', that ignored the role of places outside core cities as something more than empty spaces awaiting urban expansion, was the preference for centrifugal, core-periphery models to explain the trajectory of urban growth. The urban region is often defined as the result of the diffusion of relocation of core city activity, expanding and decentralising from large central cities to smaller centres nearby (Hall and Pain, 2006). The notion of the ubiquity of urbanisation is recent, but researchers have not paid much attention to how it developed, beyond notions of expansion forces linked to individual built-up areas (Andersen et al., 2011). The tripartite model developed by Champion (2001) is one of the few explicit attempts to show that such a process of transformation from a monocentric city into a polycentric configuration is by no means the only possible route to an urban region. He offers some corollaries to this differentiation, addressed by the findings of the previous chapters, writing how urban centres following different modes of development are likely to build different socio-economic and functional configurations, and can thereby explore different paths of economic development.

### **8.1.1 Looking for the traces of early urbanisation**

Despite the traces and superimpositions that specific forms of urban region formation may have left behind, loose and localised processes of *in situ* urbanisation were often countered, and sometimes totally obliterated, by large-scale urban expansion and contemporary urbanisation modes. However, the extent to which they could be overridden, and how much their traces have disappeared, is related to the intensity and speed of expansion of core cities and their influence on the development of the surrounding urban region. In other words, the different routes towards the urban region may have had different impacts on these fragile and place-specific processes, changing their role in contemporary spatial arrangements.

The discussion resumed several times along this study about the differences between primate and second-tier cities in terms of their impact on the urban region is

important here. In correlation to the functional and socio-economic contrasts between both types of urban region, it is likely that the intensive, core-periphery expansion process of primate cities, casting their economic and political agenda over the region and forging hierarchical links with smaller centres, has overridden more autonomous and small scale forms of urbanisation elsewhere in their urban regions. By contrast, the same fundamental differences that gave second-tier cities a less prevalent role in the definition of the functional and socio-economic organisation of their urban regions, imply that they have done less than primate cities to erase such place-specific traces of urbanisation across the territory. The centrifugal forces of large-scale expansion did not have the reach and intensity to fully override historical peculiarities and local trends of urban growth. This suggests that second-tier urban regions may be a privileged territory to observe the spatial traces illustrating these differences. Therefore, alongside the questions whether second-tier urban regions have similar growth trajectories and comply with the incorporation mode, this chapter explores the hypothesis that such expansion modes are less destructive of local configurations and historical peculiarities and may preserve more the very traces of these trajectories.

The following analysis aims to add nuance and specificity to generic descriptions of extensive urbanisation, to discuss the compartmentalised timeline of its different stages, to confront dominant core-periphery views of urbanisation, and add another layer of differentiation to the features of second-tier urban regions in Europe. Metropolisation, as an interpretative lens which abandons the constraints of ‘methodological cityism’ and core-periphery assumptions, can help illuminate the role of *all* places within the urban in early urbanisation processes. And, by doing so, it can help understand the contemporary conditions for integration in second-tier urban regions in the same way as the functional and socio-economic analyses.

## **8.2 Research approach and findings**

As explained in the methodological chapter, the analysis will address the long-term progression of urbanisation based on population change between 1890 and 2011. Population change is a recognised indicator of urban development (Turok and



Mykhnenko, 2007), which can be easily compared across different contexts. The analysis covers the urban regions of Porto, Antwerp and Bristol, as defined by ESPON (2007) and the data comes mainly from national censuses, focusing whenever possible on the smallest administrative unit of analysis, the LAU2. See section 4.3.3 in the methodology for other details. See figure 5.6 in chapter 5 for the maps of the urban regions and the name of MUAs. The indicators and maps used for the analysis are the following:

1. Maps of population density by LAU2 unit: this will assess the areas undergoing early urbanisation and bridging the urban/rural divide, their change over time and relation to the expansion process of the main urban cores.
2. Maps of population density change by LAU2 unit: this allows the visualisation of population growth nodes according to their location and evaluates whether the denser areas identified in the previous map were also the fastest-growing.
3. Graph of population growth by geographical area: this will check the dynamics, trends for simultaneity and mutual relations between core city expansion, urban fringe growth, and peri-urban discontinuous urbanisation processes.
4. Plot of population density change as a function of distance to core city according to geographical area, and comparing the 1890-1950 and 1950-2011 periods: this will assess how the distance to the core city influenced the pace of urbanisation elsewhere and whether specific areas followed independent agendas.

### **8.2.1 The early seeds of the urban region**

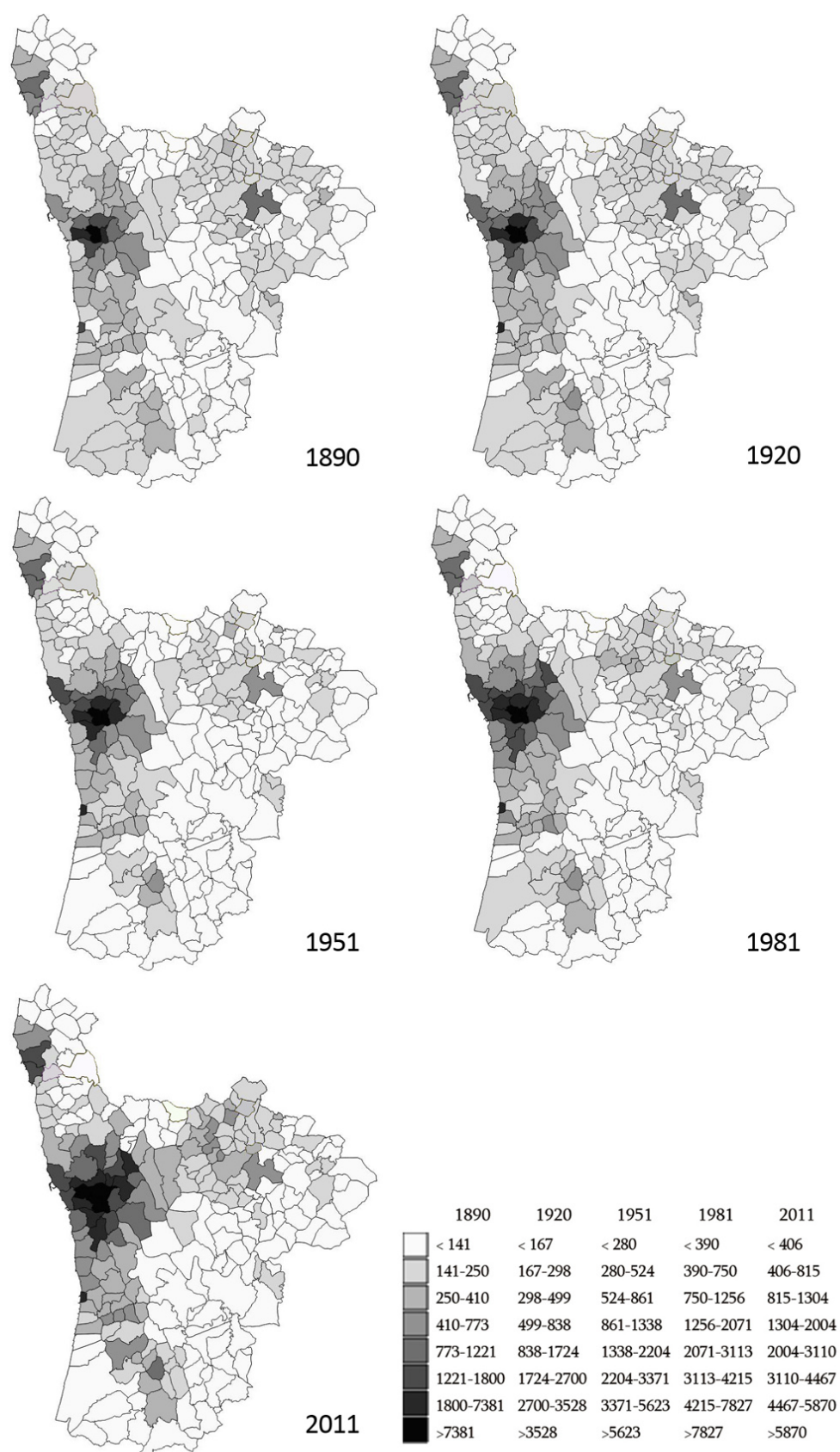
This step of the analysis applies the natural breaks method to eight density thresholds to classify LAU2 units as far back as 1890, locating the origins of urban expansion and confronting the notion of a dominant city expanding onto a void.

In Porto, the seeds of the present MUAs were already present in 1890 (figure 8.1), and the three high density cores (including the main agglomeration) were visible in all periods. The method of data classification reveals the evolution of population densities: especially in the initial periods, lower density classes covered a large proportion of the

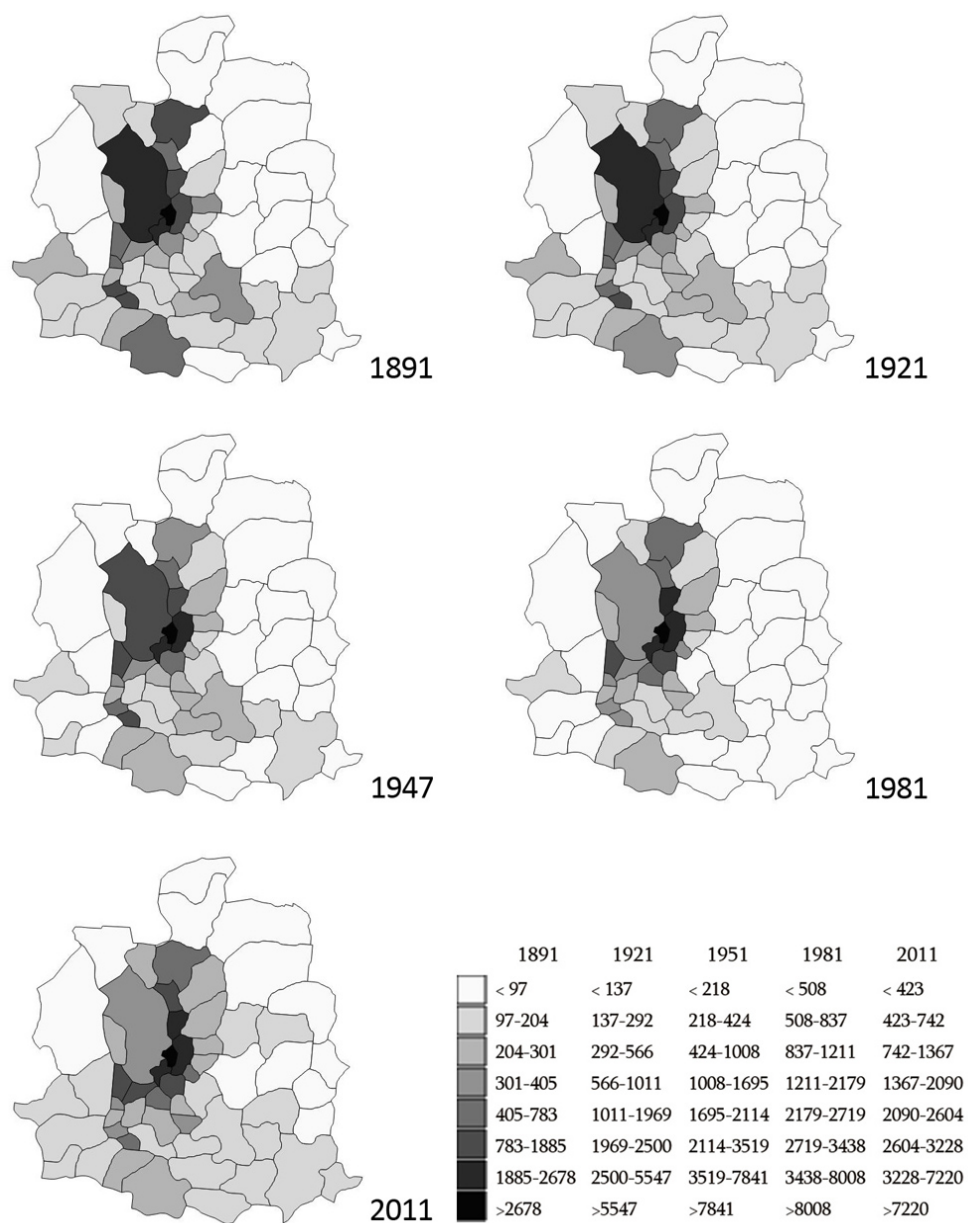
LAU2 units, especially near the coast and in the MUA east of the core city, revealing a low density but continuous urbanisation. Another visible trend is the lower variance within and between classes in more recent periods: their changing range of values illustrates how they evolved to be internally more compact and closer to each other, reducing the contrasts between degrees of urbanisation. Both trends suggest that urbanisation in the Porto region progressed through a continuous densification of old morphologies across the region, with the less dense areas densifying quicker than the established urban centres.

The case of Antwerp (figure 8.2) reveals an important difference to Porto, as the denser centres visible in 1891 (including the core city) gradually lost predominance and are now in the same density class as other remote municipalities. Like Porto, the relation between classes has become less contrasting, although there is still a large variance in the densest classes, notably concentrated in the immediate periphery of the core city. Despite this variance, mid-range density classes now dominate across the region, leading to a convergence of population densities typical of contemporary 'regional urbanisation', as argued by Soja (2011). However, unlike Soja's assumptions, urbanisation in Antwerp has progressed through continuous densification of large patches of territory, which already had significant population concentration in early periods, as the density distribution in 1890 and 1921 shows.

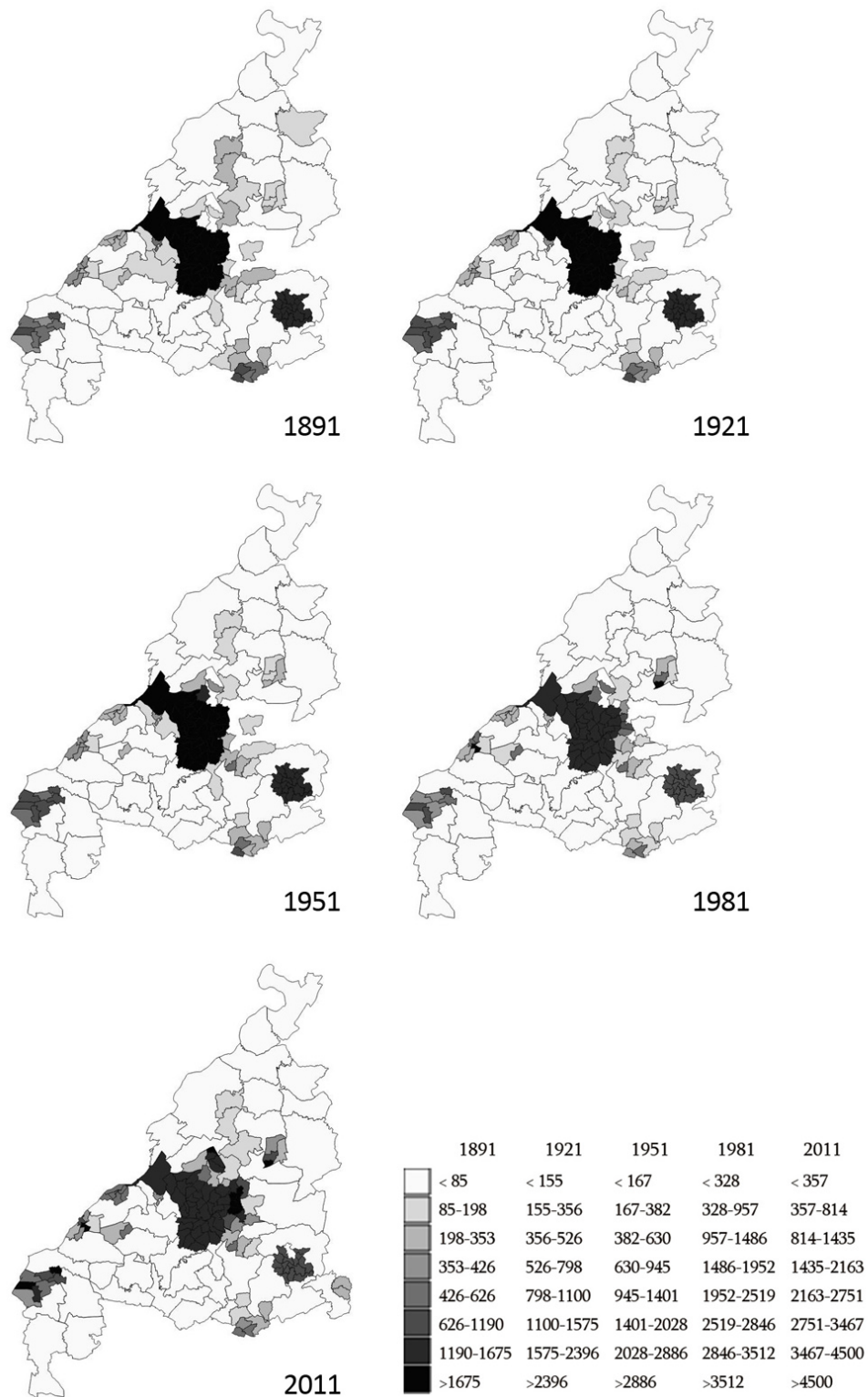
Bristol (figure 8.3) is rather different, as the individual centres did not suffer the same sprawling process as in Porto or Antwerp. There were originally more separate centres with high densities, but they remained largely self-contained. The change in the range of values of the eight density classes show a progressive overall densification of the territory but this has not eliminated the strong contrast between the less and more urbanised places: unlike Antwerp, the LAU2 units tend to concentrate at both extremes of the classification. While the different sizes of LAU2 units inside and outside core cities necessarily miss some internal variations in the larger units, this is also explained by the stronger role of planning regulations regarding urban containment that were not adopted in Belgium and Portugal until much later.



**Figure 8.1** – Population density by LAU2 unit in Porto (natural breaks method, eight density classes).



**Figure 8.2** – Population density by LAU2 unit in Antwerp (natural breaks method, eight density classes).



**Figure 8.3** – Population density by LAU2 unit in Bristol (natural breaks method, eight density classes).

### 8.2.2 Mapping population density change

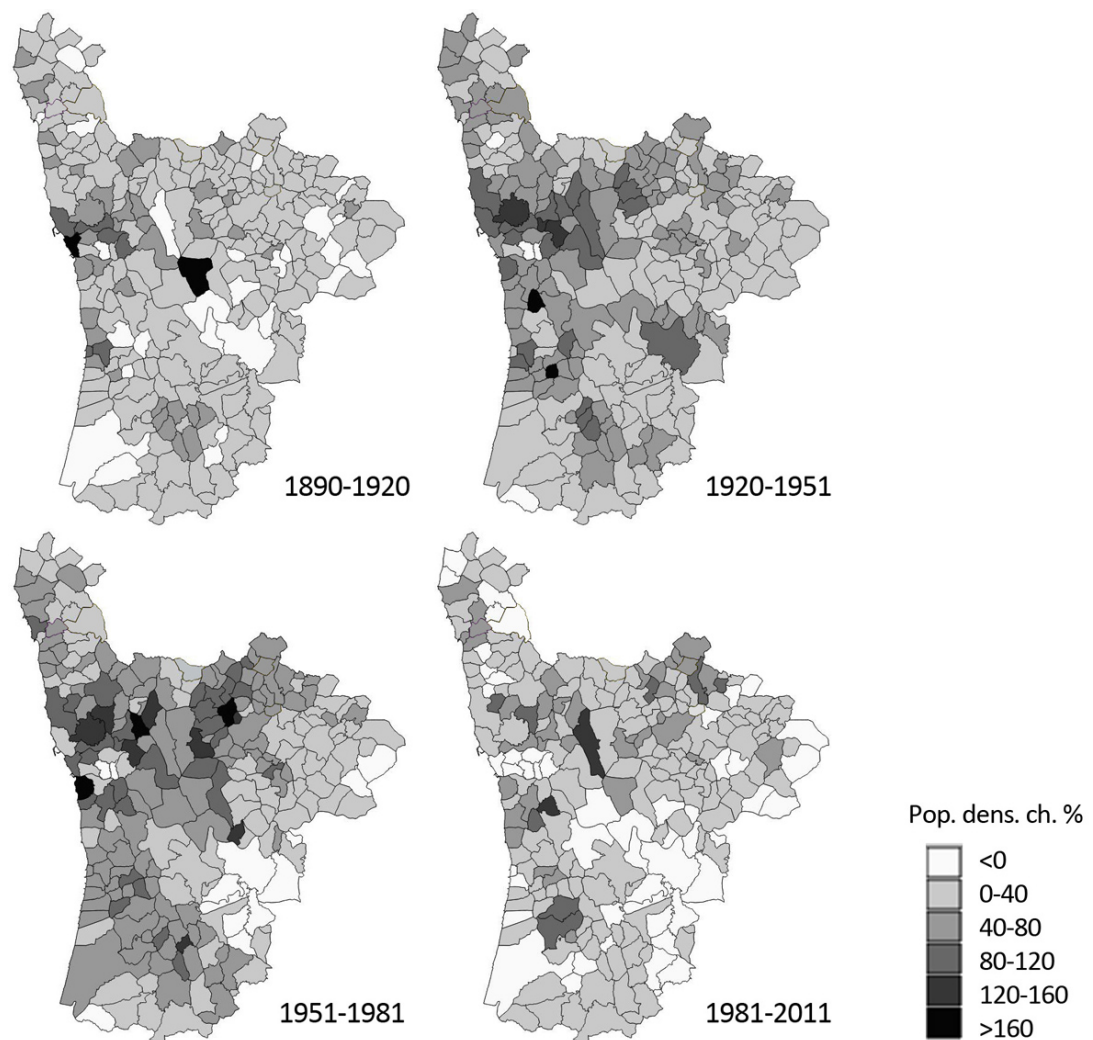
When both core cities and 'hinterlands' are analysed with similar accuracy, the dominant models of metropolitan growth are replaced by more complex, elastic and blurred urbanisation patterns, which do not comply with a laboratorial view of progressive spatial expansion along a linear timeline. The maps below depict this multi-centricity and fragmentation by showing, as far as population change is a reliable indicator, where and when urban growth occurred in the region.

Figure 8.4 shows an initial period of similar density change all over the Porto region, followed by stronger growth in the northern fringe of the core city between 1920 and 1951. Small growth nodes had begun to appear in more remote regions, mainly due to the development of small industrial areas served by local population. The fragmented pattern does not reveal the impact of centrifugal core city expansion. 1951-1981 marked the strongest increase virtually everywhere in the region (except for the core city), especially in the Porto MUA, stressing the emergence of smaller urban centres that build the core agglomeration, as well as the densification of the FUA population outside predefined centres. The core MUA gradually integrated with other MUAs and a continuous pattern of similarly high growth rates can be read across a wide area. The 1981-2011 period resumed the earlier pattern of smaller and isolated growth patches in particular areas, surrounded by areas of little increase or even population loss.

In Antwerp (figure 8.5), high densification of isolated patches is an even stronger trend, mostly visible in the east of the urban region, where several fragments both in the Antwerp MUA and the FUA were experiencing higher early growth than elsewhere. 1947-1981 corresponds to a strong population increase everywhere in the region, with many municipalities more than doubling their population, both in the periphery of Antwerp and further away in the FUA, indicating a relative autonomy from core city influence. Interestingly, no special growth was detected in the south of the region, closer to Brussels; the greatest change tends to be in the eastern fringe. Since 1981, growth rates have decreased substantially.

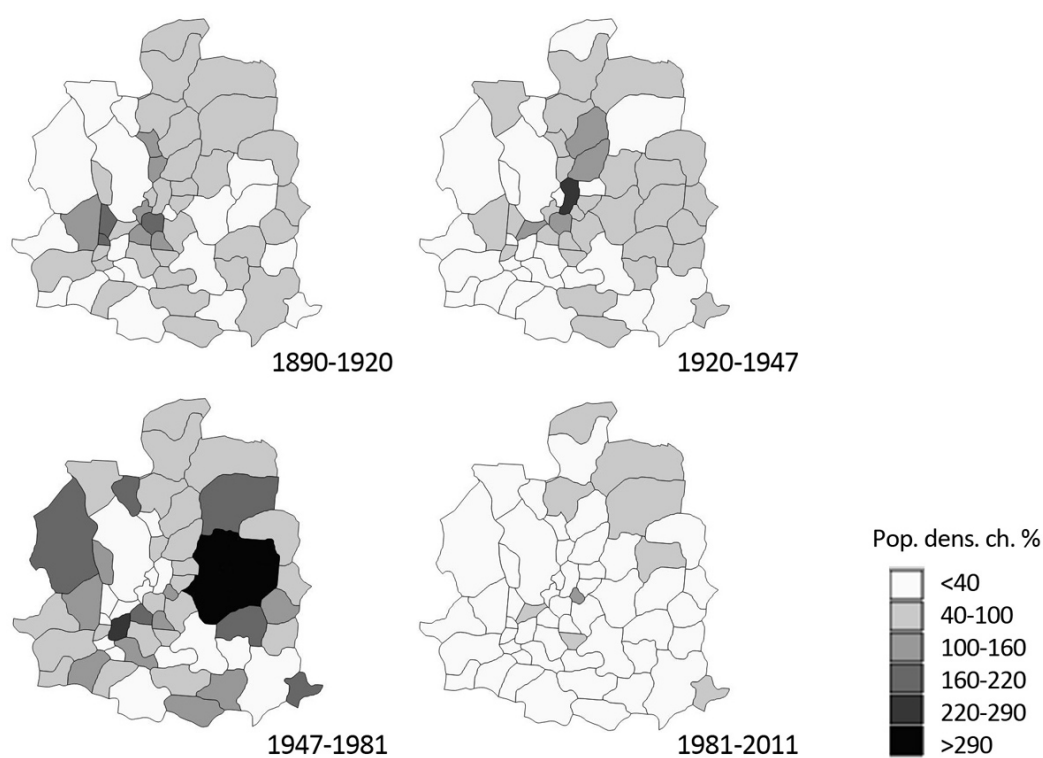
Bristol (figure 8.6) lacks similar isolated cores of strong density change partly due to the unreliability of early data for individual LAU2 units: the continuous colour

patches indicating similar growth in large parts of the urban region can be deceiving. Between 1891 and 1921, growth occurred mainly around established secondary centres. 1921-1951 marked a higher growth tendency in connective areas outside the main centres, namely north and south of the core city. This trend continued in the next period, with a more fragmented pattern of densification expanding further north and south. The more remote areas in the region enjoyed the highest population growth in recent times, even if the general pace has decreased everywhere.

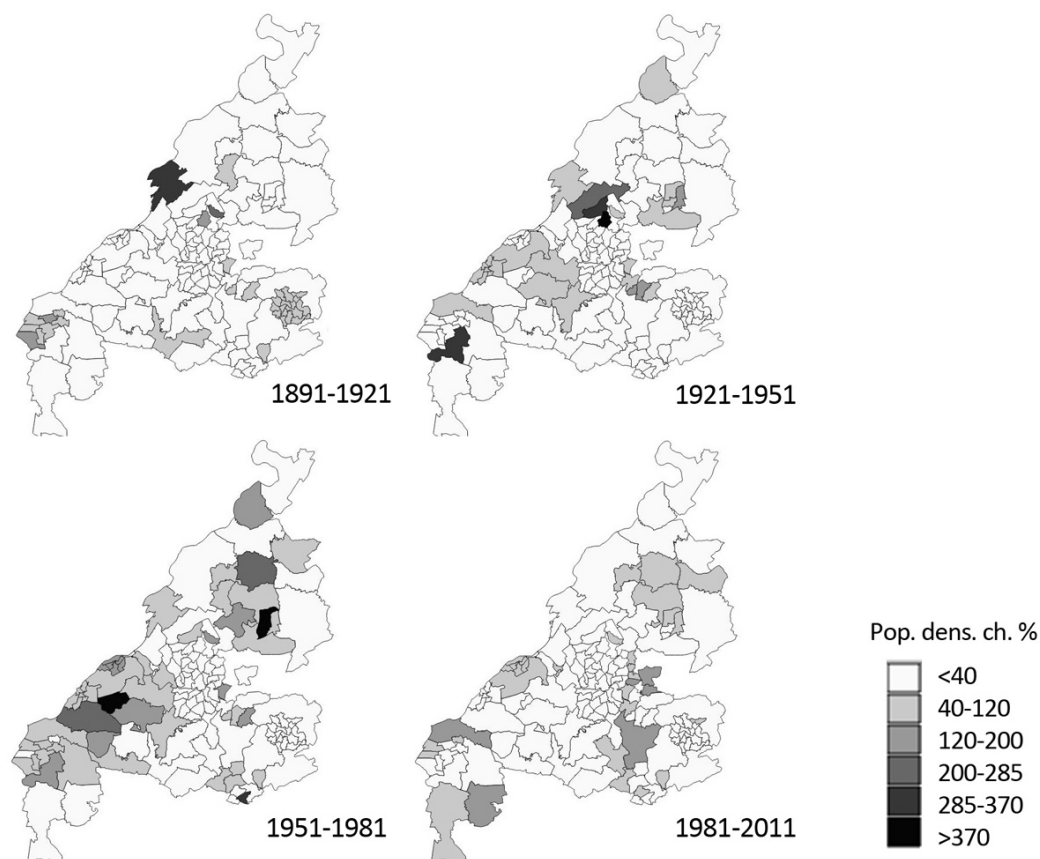


**Figure 8.4** – Population density change per LAU2 unit in Porto 1890-2011.





**Figure 8.5** – Population density change per LAU2 unit in Antwerp 1890-2011.



**Figure 8.6** – Population density change per LAU2 unit in Bristol 1890-2011.



### 8.2.3 Population growth by geographical area

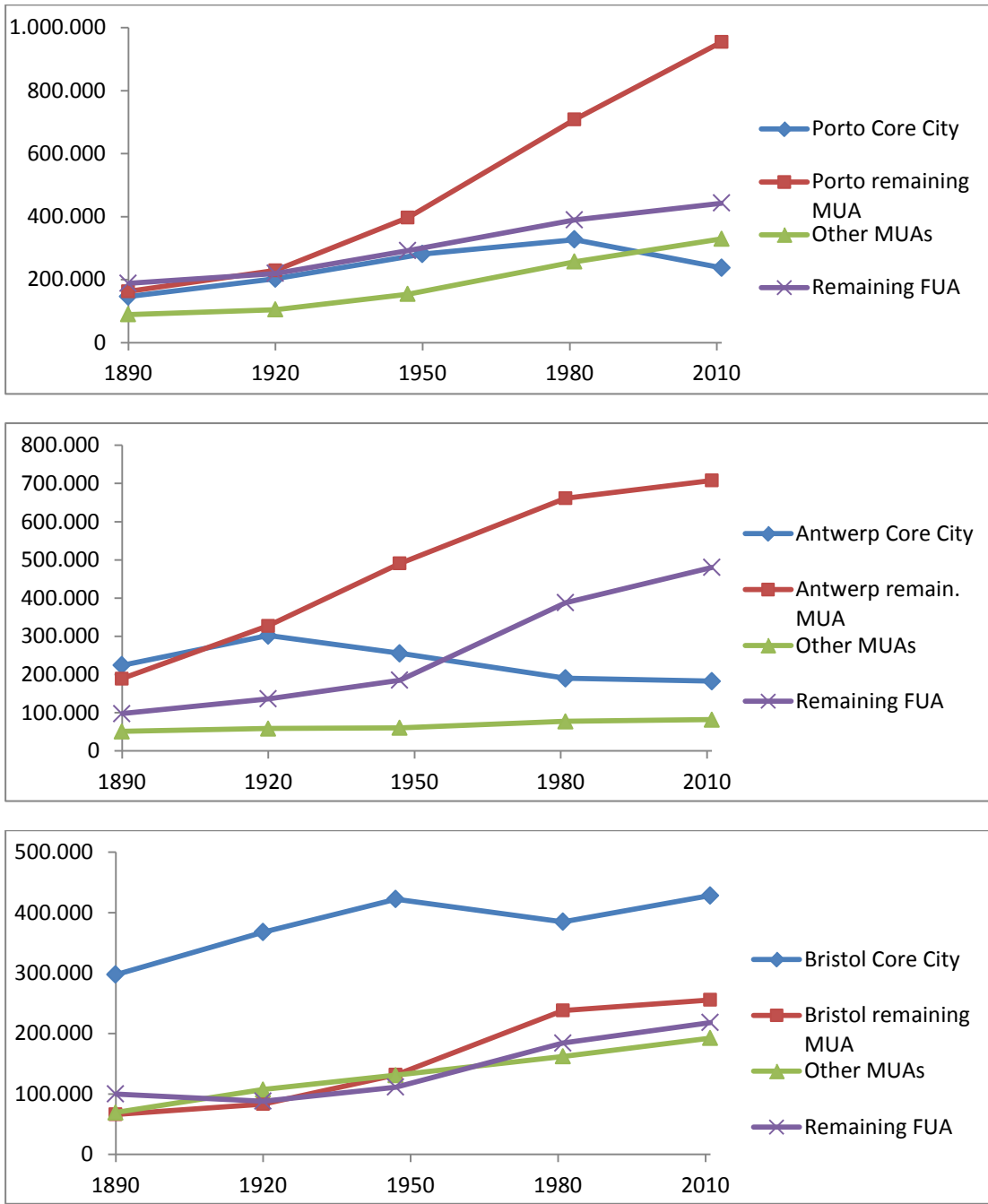
The centrifugal model of growth, based on successive stages of core city growth, sub-, de- and reurbanisation (Berg et al., 1982), assumes that different growth modes dominate in different periods and that they are sequential, in the sense that a metropolitan area will undergo a certain stage – e.g. counter-urbanisation – after having experienced all prior phenomena – e.g. suburbanisation. This neglects simultaneity and contradictory trends that have been part of growth in urban regions for a long time, despite the models focusing on the more massive shifts of the last 30-40 years. Locating the older manifestations of such notions is the purpose of this section, by comparing long-term population change in the different parts of the urban regions (table 8.1).

Porto is characterised by an early balanced distribution of population between core city, agglomeration and FUA (which was basically a densely occupied ‘rural’ area). The core city was never very significant, but there was no demographic dominance even of the core agglomeration (Porto MUA) and many people were living in the remaining FUA. From 1920, the core MUA started to grow fast, but that did not correspond to the emptying out of the core city, other MUAs, or the FUA, whose growth rate remained unaffected. The population loss in the core city in the last 30 years is also not enough to justify the growth of the core MUA, suggesting a mix of core agglomeration growth and the general densification of dispersed urbanisation across the region.

The city of Antwerp was the main demographic core until 1950 but a tendency for population loss started from 1920. Note that, to avoid inconsistencies, the values refer to the city’s original nine districts and do not consider the annexation of several municipalities in 1983. While all other areas experienced some growth, the strongest trend has been the great population increase in the lower-density FUA, lacking dense morphological cores, now concentrating one third of the total population. Considering the early distribution of dense centres visible above and the location of the fast growing municipalities, this suggests a trend of densification of a pre-existing dispersed pattern.

In Bristol, the core city remained the largest population centre throughout the study period. The population of the city increased strongly until 1951, then suffered a gradual loss and has been growing again recently. The remaining core MUA was

comparatively unimportant until 1951 but then experienced growth at the same time that the core city was losing population. Unlike the mixed growth processes in Porto and Antwerp, this period may be considered closer to a classic suburbanisation process. Other MUAs and the FUA also increased growth in the post-1950 period, but not at the rates of the other two cases. The core-periphery hierarchy has been less affected.



**Figure 8.7 -** Population change in Porto, Antwerp and Bristol 1890-2011 by geographical areas (core city, remaining core MUA, other MUAs, remaining FUA)

#### 8.2.4 Proximity to the core city and population density change

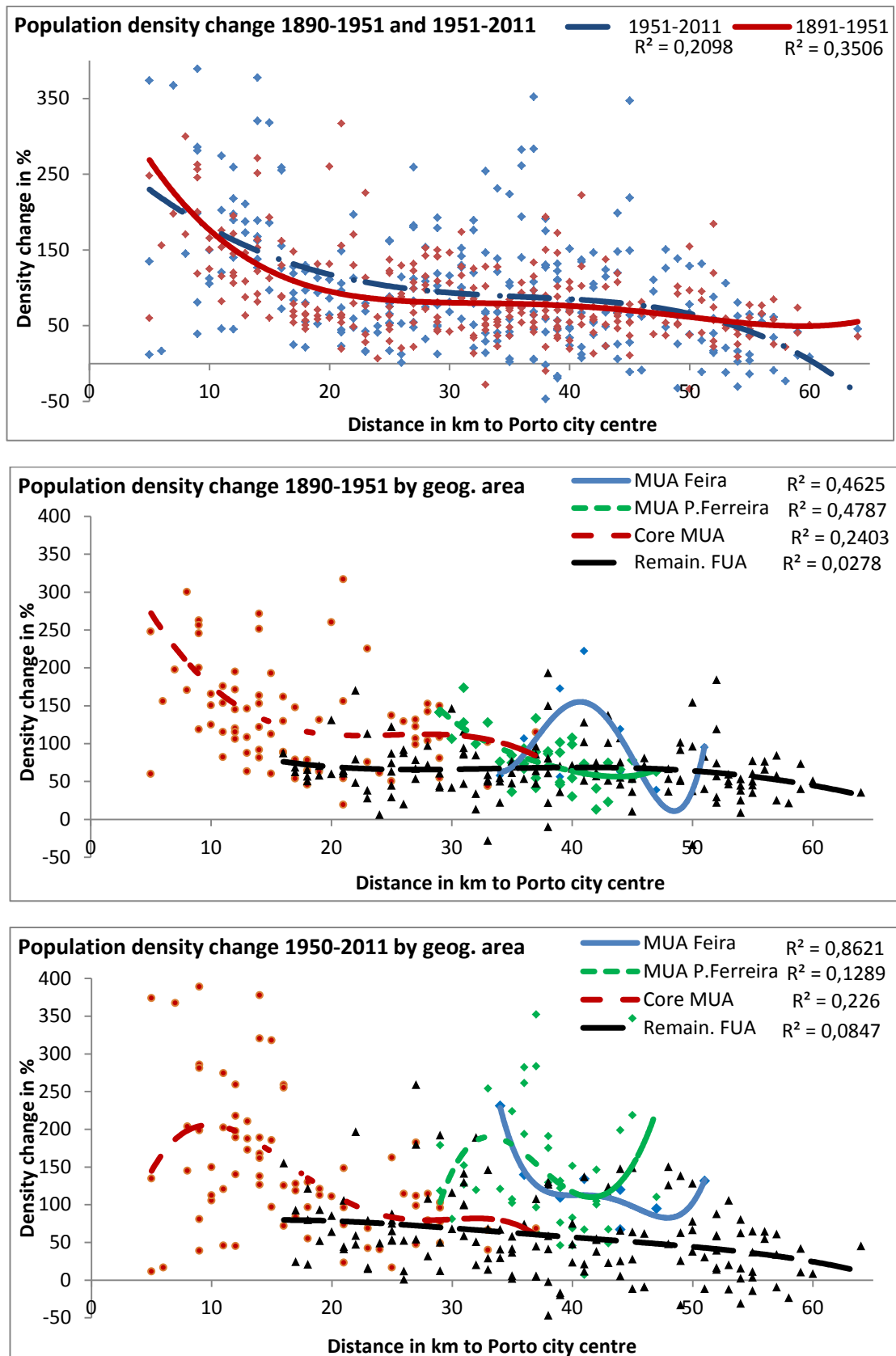
The last indicator analyses whether being geographically close to the core city had an impact on the population density variation of individual LAU2 areas, by depicting their rate of change as a function of distance to the core city. The distance-density plots below evaluate this from two perspectives: the general trend of the urban region for the 1890-1950 and 1950-2011 periods, and the trends of individual areas within the urban region (FUA and MUAs) for the same two periods. Note that in Porto only two secondary MUAs have a sufficient number of LAU2 units with data for all periods to produce a relevant trend line. Secondary MUAs in Bristol and Antwerp also lack these features and are therefore not shown in the graphs.

In Porto (table 8.2) the influence of core city proximity was similar in 1890-1951 and 1951-2011. Both regression lines fall smoothly as distance increases with no major peaks affecting that trend. The next two graphs illustrate the trends in individual geographical areas. Here we can see how the pattern of core MUA changed over time, peaking in 1951-2011 further away from the core city than in 1890-1951. The FUA areas follow a smooth decreasing path similar to the general urban region trend. However, the other two MUAs considered in the analysis – both very industrialised – clearly followed an independent agenda throughout the whole study period, and their regression lines cannot be linked to the dominant influence of Porto in any way. They were constrained by their own sub-centres, suggesting a non-hierarchical form of polycentricity in the urban region.

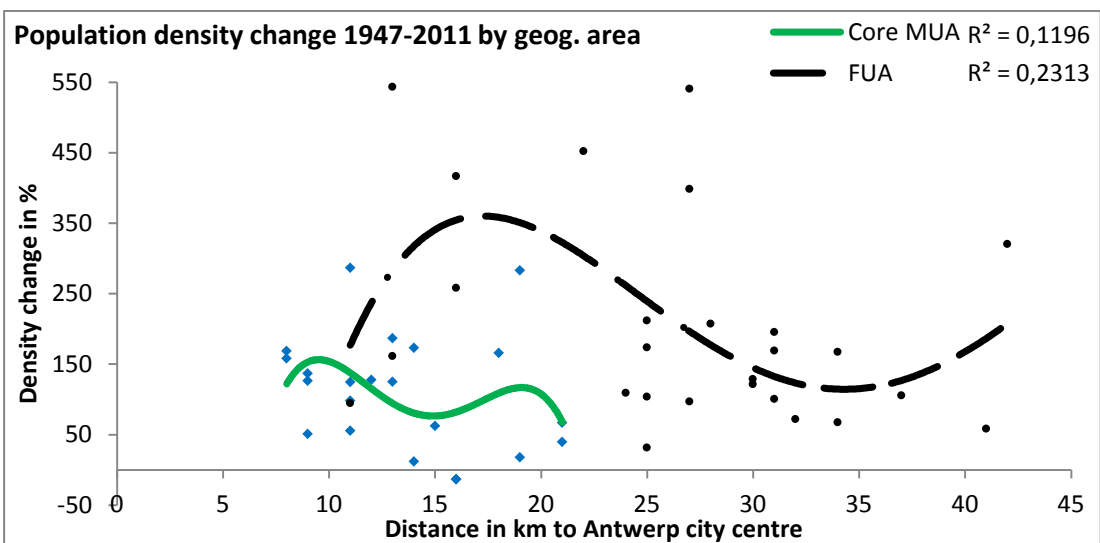
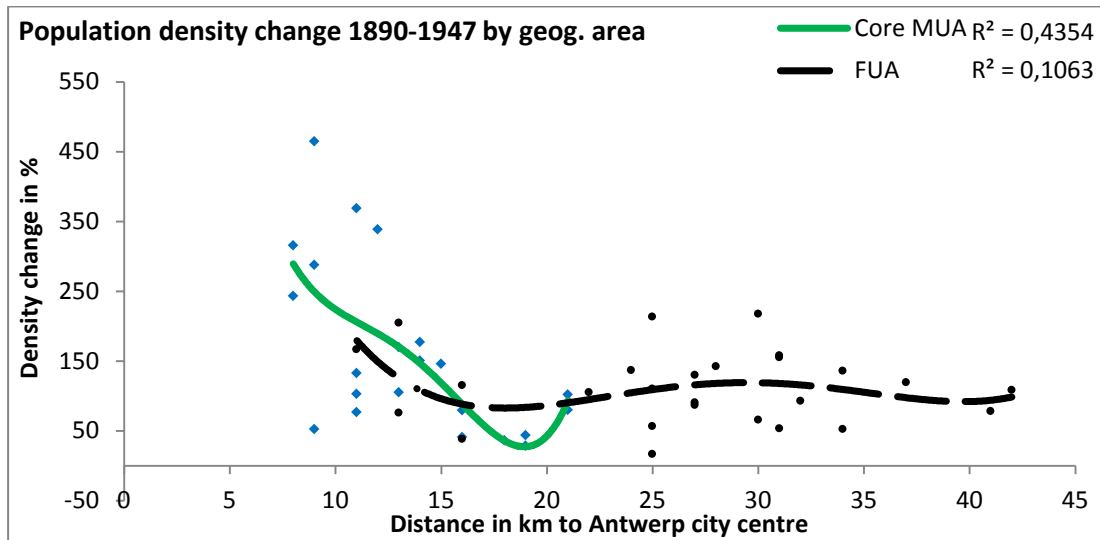
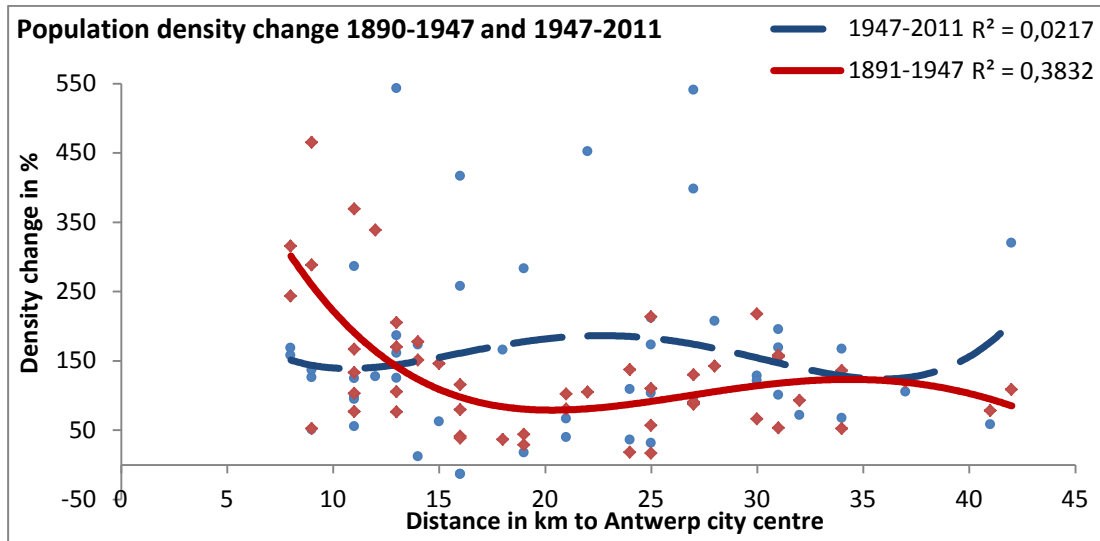
The influence of proximity to Antwerp (table 8.3) in the population growth of the urban region changed significantly from 1890-1947 to 1947-2011. The first period shows a strong impact of the core city, possibly due to the great development of the Port of Antwerp and related activities. The second period illustrates the role of economic diversification and relocation throughout the region, and the proximity to the core city no longer corresponds to stronger population growth. The same pattern is visible if we distinguish the Antwerp MUA and the surrounding FUA – the MUA is strongly influenced by core city proximity in 1890-1947 and not particularly in 1947-2011, while the FUA timidly follows a similar pattern in the former period but mostly detaches from it in the latter, peaking at around 18km distance and rising again in the most distant

areas, probably influenced by the juxtaposition of relations with Brussels (south), Ghent (west) and the Netherlands (north-east).

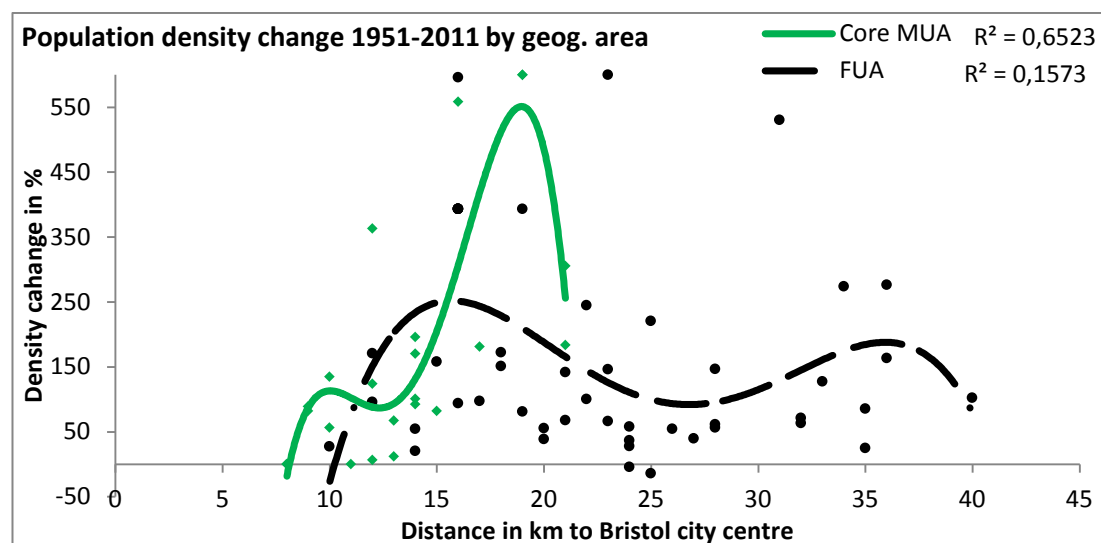
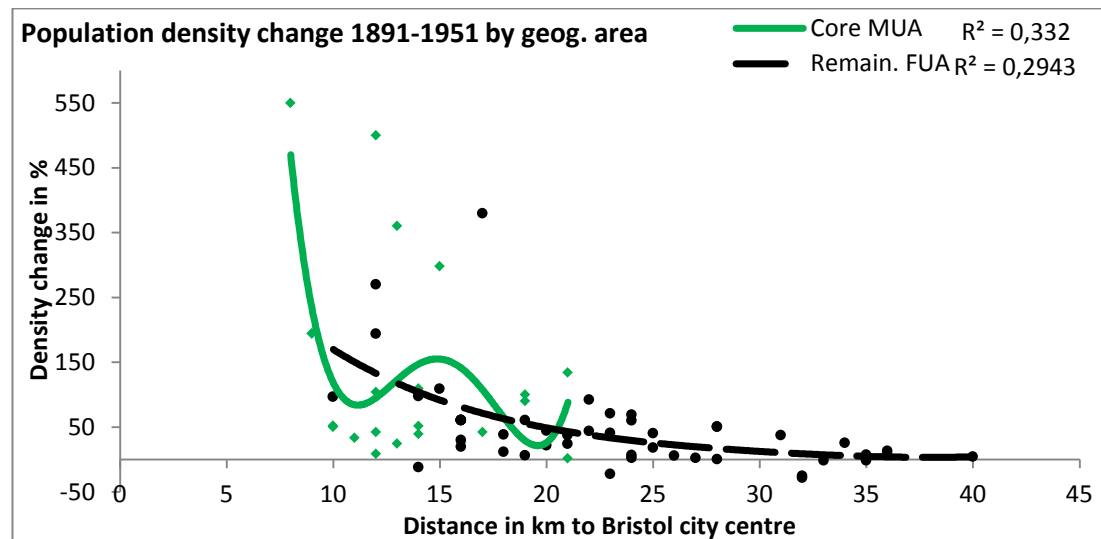
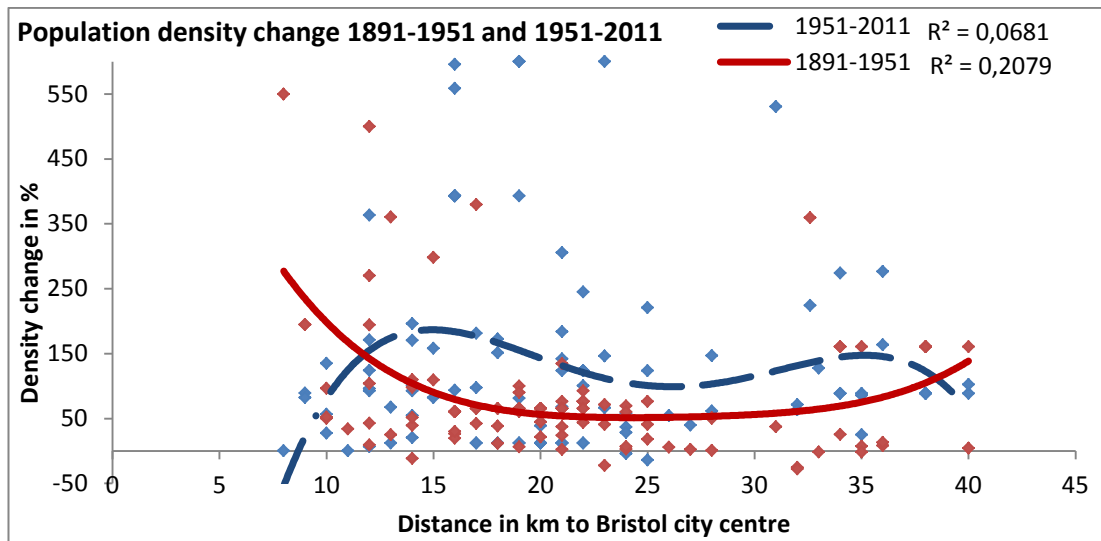
In Bristol (table 8.4) many equally distant LAU2 units show disparate values, which reduces the overall reliability of the analysis, as can be seen by the lower  $R^2$  values. This is in part due to the continuous administrative boundary changes in the UK affecting the stability of LAU2 units, but also to the relatively compact growth experienced by the urban centres – unlike Porto and Antwerp, it is possible for an individual LAU2 unit to increase 500% while the next unit shows little growth. The general trends show that between 1891 and 1951 the variation of population density showed a strong increment closer to the core city and around the 40 km distance, arguably reflecting the influence of Bath. This was inverted in the 1951-2011 period, with lower growth rates in the areas closer to Bristol and an increase around the 15 km distance. The pattern is clearer in the division by geographical areas: the 1951-2011 trend in the Bristol MUA shows greater density increase as the distance to the core city grows, illustrating the ‘leapfrogging’ of development over the Green Belt adopted in the late 1950s and the rapid growth of commuter towns like Yate. The FUA curve peaks around 15km and rises again in more distant areas, stressing the importance of alternative centres outside the Bristol MUA.



**Figure 8.8** - Population change as a function of distance to core city in Porto: (1) for the whole urban region, 1890-1951 / 1951-2011; (2, 3) by geographical area (FUA/MUAs).



**Figure 8.9** - Population change as a function of distance to core city in Antwerp: (1) for the whole urban region, 1890-1951/1951-2011; (2, 3) by geographical area (FUA/MUAs).



**Figure 8.10** - Population change as a function of distance to core city in Bristol, (1) for the whole urban region, 1890-1951/1951-2011; (2, 3) by geographical area (FUA/MUAs).

### 8.3 Summary and interpretation

This analysis tried to address questions related to the historical trajectory of urbanisation in three European second-tier urban regions. It looked for insights about the actual timing, sequence and coexistence of different modes of urban expansion and evaluated the role of core cities and other centres in the growth process. By doing that, the analysis defined another set of distinctive features of second-tier urban regions, situating their historical development closer to the incorporation mode proposed by Champion (2001).

The strongest feature of the Porto region is the largely autonomous development process of its different sub-regions, more erratic and fragmented than Antwerp, where there seemed to be greater urgency to coalesce into a networked unit. Porto as a core city lacked a strong influence on the region, which suffered forms of dispersion and peri-urbanisation without having experienced earlier periods of centrifugal expansion and suburbanisation. The findings illustrate this: early patterns of polycentric and generalised urbanisation of territories; simultaneous and continuous population growth in MUAs and FUA regardless of the dynamics in the core city; densification of isolated patches across the region with no visible indication of a centrifugal process (even the core MUA growth emerges from the multi-centred dynamics of nine municipalities); and little influence of core city proximity in general growth, with strongly independent trends in sub-regions around alternative morphological cores.

This trajectory can be related to two parallel phenomena, already mentioned in the discussion about socio-economic differences in chapter 7: first, unlike Lisbon, that concentrated political and economic power and high-end functions in the core while decentring housing and lower-order activities to the periphery (Domingues, 2009), Porto lacked the role of the state and economic power as producers of centrality to build such core-periphery contrasts. Second, settlement patterns in the remaining region were based on small cadastral divisions, a 'rhizomatic' mobility network connecting dispersed housing and activities (Portas et al., 2007), and small urban fragments embedded in a mix of rural lifestyles and small-scale industrialisation. This generated a progressive densification of the territory but no critical mass or functional clustering, therefore little demand for new urban functions and little need for long-distance commuting.



In Antwerp, the population loss of the core city came with a strong densification of the core MUA but even more of the FUA. While this could be expected for the dense MUA, as a consequence of core city centrifugal expansion and relocation of population, the FUA is more remote and lacks important morphological cores. This confirms that the urbanisation of Antwerp has also been more about the densification of an existing dispersed structure than expansion spreading from established urban cores: “*the general urbanisation of the territory is to a large extent a parasite of the pre-existing network of rural roads which undergoes no restructuring during urbanisation.*” (Meulder, 2008: 28). An early and dense coverage of public transport, small cadastral divisions and a multitude of municipalities<sup>52</sup> – the latter two aspects similar to Porto – also played a role (ibid.). The attractive force of the core city was initially greater in Antwerp than in Porto, but the trends for simultaneous growth in several places show the existence of alternative, if incipient, urban territories. Their role has gradually gained importance, as suggested by the changing impact of core city proximity in population change.

Porto and Antwerp have been embedded very early in an extensive process of dispersed growth that led to a dense and continuous urban landscape, rather than a polycentric region of discrete urban cores. The case of Bristol is different; the region was from the beginning the most polycentric, in the sense that there were several discernible urban cores, but their individual growth patterns have been more compact – see the discussion about polycentricity and dispersion in chapter 5. Urbanisation in Bristol remained relatively self-contained until recently. The outcome is a core city surrounded by smaller urban centres, all with relatively compact development patterns. This is consistent with Barry’s (2000) description of the region since the 17<sup>th</sup> century as consisting of numerous small and medium towns rather than concentrated in a single central city. Nevertheless, Bristol does stand out from the other case studies and the core had a dominant share of population throughout the whole study period. Bristol is the

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<sup>52</sup> See again Harrison and Heley (2015) about how the ‘non-city’ spaces in an urban region actually gather not only population but also an important part of the region’s decision-making powers and therefore need to be considered at the same level as established cities when envisioning a governance framework for the urban region. In Belgium and Portugal, all municipalities have formally the same powers over their territory, regardless of their size or urban-rural typology. The situation in the United Kingdom is more ambiguous, especially since the recent City Deals aiming at devolution of planning and fiscal powers to the largest cities.

only of the three cases where population loss in the core city has been relatively consistent in time and scale with the growth of the immediate MUA, being thus closer to a classic ‘edge-of-city’ expansion model, mainly due to the economic success of the north fringe from the 1970s (Boddy et al., 2004). In contrast to the apparent ‘naturalness’ of the dispersion and densification processes in the other two cases, based on ancient factors intrinsic to the territory, urban growth in Bristol was more planned, directed and supported by investment and infrastructure.

### 8.3.1 Research methods, policy priorities and the role of history

An implication of this analysis is that, despite the traditional neglect of the role of places outside core cities in the processes of urbanisation, there is more to say about their history than merely seeing them as empty space awaiting urban expansion. ‘Non-urban’ territories played indeed an early role in the processes of dispersion, polycentricity and extensive urbanisation, often following an autonomous agenda invisible to urban studies concentrated on core cities and neglected by models assuming centrifugal urban expansion: in Belgium, “*late nineteenth-century urban dispersal was indeed much more about autonomous urbanisation within the countryside than about the suburban expansion of established cities.*” (Fisher, 2013: 334). Urbanisation was spread out as much as territories were given identity through place names, local networks of activity and people finding their way through landmarks, in the sense proposed by Lynch (1960): rural parish churches and their bell towers immediately come to mind. In fact, even before the census years considered here, this was already clear to some observers, as noted by the description of Northwest Portugal as a ‘continuous city’ (Silveira, 1789; see chapter 3) or Daniel Defoe’s view of the Bristol region punctuated by ‘innumerable villages’, quoted above. Actually, Barry writes that the South West of England is not usually associated with sudden urban growth in the main centres in the 19<sup>th</sup> century, like the Midlands, “*in part because of the strong urban infrastructure already in place, with over a quarter of the region’s people living in towns by 1660*” (Barry, 2000: 67).

Besides adding local specificity to the generic and travelling models that often underpin research on extensive urbanisation, these insights speak directly to the recent

concerns of researchers about the city-centric bias of both city-regional research and policy-making, and to the initial arguments of this study: as the role of places outside core cities in the development of current configurations is gradually recognised, core-periphery and spatially selective perspectives must be replaced by the consideration of the full organism of the urban, in which the 'city' is a rather successful and generalised form. In this sense, an interpretative lens that recognises this scale as an 'extensive city' with urban qualities and problems, supports integration strategies and sees urban planning as a tool to ensure liveability at any point of the territory- argued here as metropolisation - is particularly appropriate to deal with this type of urban entity.

*'The land is a palimpsest'*

So what is new? Mainly the scale of the phenomena. Dispersed and fragmented urbanisation has become less based on small buildings and cadastral divisions and a tight mesh of local connections to rely more on large infrastructural linkages and functional concentrations. While an increasingly complex functional mix is visible at the urban region scale, individual areas tend to be more monofunctional at smaller scales (logistics parks, shopping centres, etc.), unlike the former 'filigree' of different activities and land uses in close vicinity. Hierarchies emerge and despite the blurred urban forms, imprecise boundaries and dispersed growth processes, the territory is less isotropic and the fine grain of the 'urban' has now turned coarse and patchy. Spatially contained lifestyles based on localised relations and needs have been replaced by mobility and interdependence at territorial scales.

The relevance of a long-term analysis of the urban region also hinges on the fact that these new and old forms and scales of urbanisation often coexist. The ancient occupation of the territory was consolidated, rather than erased, throughout the years and left behind a porous mesh of forms and networks providing support for contemporary urban growth (Champion, 2001; Portas et al., 2007). But there are differences between intensive expansion processes, spreading from a strong core through large patches of suburban growth, functional nodes and massive infrastructure, and trajectories in which the core has less power and size and by consequence less impact on

the development of the urban region. This contrast arguably has an influence on how much pre-existing configurations were obliterated by metropolitan expansion and the traces of the past were kept.

The land is a palimpsest (Corboz, 1983) and the problems faced by planners working with current urban forms relate to where they come from and what was there before. How do planning strategies address the dissociation between large-scale infrastructural networks (hierarchical and focused on discrete centres) and existing forms of urbanisation (isotropic and extensive, a continuous fabric rather than a sequence of nodes)? How do dense functional concentrations adapt to a sponge-like territory filled with a capillary fabric? Addressing such questions armed with a knowledge of the nature of the territory and how it developed can create the basis for the ‘territorial project’ (Vigano, 2012) embedded in the concept of the urban region. This is arguably more important in territories where homogenising forces played a weaker role and place-specific contexts became more important. In Antwerp, the lack of such knowledge was criticised by Meulder et al. (1999), seeing the 1997 Regional Master Plan for Flanders as an unfit model borrowed from Dutch experiences, trying to impose a ‘compact city’ policy on a “*totally contrary*” (1999: 80) spatial structure. In Porto, Domingues (2008) has pointed out the dead ends encountered by generic policy aims, such as urban containment and polycentricity, when applied to the urbanisation patterns of the region. An exercise in specificity and precision can respond to the calls by Sieverts (1997) and others for greater attention of policy and planning to the spaces in-between ‘proper’ cities where much population actually lives and works.

### **8.3.2 The explanation of proto-industrialisation**

Descriptions of extensive urbanisation processes similar to the above have been associated to regions experiencing early (proto-)industrialisation. These regions were supported by a dispersed network of small industry units inserted into rural typologies that did not tend to cluster into large complexes or promote the emergence of important functional and demographic cores. Rather, proto-industrialisation would adapt to and colonise the previous cadastral and topographic constraints, and, as long as there was

sufficient population density, it could recruit the needed workforce from people living nearby who would literally walk to work<sup>53</sup>, with no need for major infrastructural, cadastral or functional changes in existing settlements. As argued by Mendels for eighteenth-century Flanders, “*industrial growth was induced and promoted by population growth. [...] The highest levels of rural industrialization [...] were found in areas with the highest population density and land fragmentation.*” (1971: 269). Proto-industrialisation also developed early in South West England around Bristol, mainly as heterogeneous and deconcentrated units of cloth industry, “*each with specific urban networks*” (Barry, 2000: 81), and northwestern Portugal, where the phenomenon of ‘diffuse industrialisation’ was shown to be characteristic of regions with considerably high population densities but low rates of urbanisation (Santos, 1992).

This insight – population without proper urbanisation – suggests a hypothetical relation between the type of core city and the structure of industrialisation in its hinterland. This discussion does not go as far back as the emergence of proto-industrialisation, nor does it cover its multiple explanations or the challenges to the conceptual appropriateness of the notion. However, Barry (2000) argues that one of the reasons why the city of Bristol did not grow as much as its Northern rivals, is that it did not forge hierarchic ties with its industrial hinterland, consolidating fragmented nodes and promoting (through political power and economic policy) the emergence of denser and larger complexes in the region. Instead, the city left the development of the emerging textile industry to its own devices, and focused on its main economic priority of being a colonial port city. There was a functional differentiation and little contact between the workforce in Bristol and the workforce spread across the region.

In this sense, it is interesting to note that Porto and Antwerp were also port cities, largely relying on related mercantile activities, and have equally failed to consolidate dense industrial nodes in their surroundings. Arguably, this can be a case of *need* and

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<sup>53</sup> This also relates to the fact that population dispersal throughout the 19<sup>th</sup> century is only partially explained by the effects of the extension of railway. Although a correlation between increasing population densities and the extension of rail (more based on number and proximity of stations than length of lines) has been detected, for example for England and Wales (Felis-Rota et al., 2011), in some cases, like Northwest Portugal, the railway would often follow previous demographic dispersal rather than the other way round.

*ability* to do so. Cities less concerned with an outward-looking economy and more dedicated to exploit the emergent economies of their own hinterland would forge stronger ties with this region, promote its agglomeration economies by upscaling industrial concentration, gradually insert greater infrastructural and functional changes in pre-existing settlements, attempt to control decision-making, and ultimately build a more hierarchic political, functional and socio-economic structure at the urban region scale. This process should be more destructive of pre-existing structures but arguably needs a core city which is large, politically powerful and gathers a dominant part of the region's economic activity. This was not the case of our three 'extrovert' second-tier cities. Hence the view by Barry, following his argument about the detachment between Bristol and its industrial hinterland, that, despite population growth, there was little sign of "*a growing Bristol [demographic] domination of the region.*" (Barry, 2000: 79).

This is strikingly similar to the description of 'dominant' primate cities as opposed to 'weaker' second-tier cities discussed above, namely concerning their need and ability to constrain the economic, spatial and functional development of the urban region. The question whether second-tier cities (or perhaps 'non-primate' cities) were less concerned with and less able to urbanise and control their surroundings, and also tend to be those whose spatial patterns were less affected by large-scale consolidation of industry and where the traces of early urbanisation are more visible, provides another path for further research on comparative urban history.

## **8.4 Conclusions**

The findings of this and the previous chapters show that, in terms of historical trajectories and contemporary configurations of urban regions, one size does not fit all. The results help to sustain the claim that there are no 'pure' and laboratorial forms of urbanisation and the route to an urban region shows simultaneous and contradictory features of expansion, dispersion, consolidation and densification. Bristol evolved from a progressive expansion of multiple urban nodes, large and small, while Porto and Antwerp followed a more isotropic process of dispersion and densification largely detached from existing cores. In all cases, place-specific factors influenced development

and the modes of urbanisation did not follow a clear sequence or defined chronology. Dispersed, fragmented and undirected urban processes started early and are in many ways intrinsic to ancient territorial conditions, rather than based on recent changes such as suburban lifestyles, functional relocation or the advent of the private car. Strong and continuous core city dominance, either by exerting centripetal and centrifugal forces or influencing the pace of growth elsewhere, could not be detected.

Overall, and despite the variable trajectories, this situates the three case studies within Champion's incorporation mode (2001). Porto, Bristol and Antwerp are neither monocentric cities scattering 'suburbs' over a previously unoccupied territory nor a set of similar centres gradually fusing as a result of individual expansion and infrastructural linkages. They are the cores of complex and fragmented regions of generalised urbanisation, generating both secondary centres and scattered urbanised areas lacking a morphological core, which were relatively self-sufficient and free from core city influence before becoming part of an urban region. Many contemporary urban regions have experienced different and subsequent growth modes: see e.g. the 'blended' mode of the Madrid metropolitan region, evolving from a centrifugal to an incorporation and then a fusion mode (Solis et al., 2015). However, the findings help illuminate cases which have arguably *not* moved along successive modes, but rather experienced one of them without having previously gone through others.

A consequence for planning is that the whole territory tends to be filled with infrastructure, gradually accumulating through time, and receptive to be occupied by contemporary programmes with lesser need for investment and major spatial alterations (Meulder, 2008). If this infrastructural 'redundancy' comes with enhanced accessibility, presence of urban functions and a history of cultural identification with local settlements, there may be greater incentive to stay and work in a particular place, thus reducing core-periphery hierarchies and generating greater socio-economic diversity at local scales. The existence of these relations is admittedly speculative, but they are given consistency by the findings of the empirical work up to this point.

Indeed, the socio-economic and functional analysis of the preceding chapters supports the veracity of Champion's corollary that this form of development allows smaller centres to present a stronger alternative to the main core, in terms of hosting

functions, services and jobs, than the ‘satellites’ emerging from the centrifugal mode. This type of urban region may be specially compatible with second-tier cities: while the findings of this chapter do not claim generalisability, we have seen that the common features of Porto, Antwerp and Bristol stand in direct opposition to the core-periphery contrasts assumed as the ‘original state’ of many hegemonic, primate cities. Cities lacking this ‘big central’ condition (i.e. lacking a ‘capital effect’, the historical role of the state and the economy as producers of centrality) have arguably failed to counteract the tendency for dispersion, fragmentation and autonomy of urbanisation throughout their hinterland. Population and activities have not so much ‘decentralised’ but directly emerged *in situ* and clustered across the urban region with little respect for boundaries or hierarchies. Functional and socio-economic configurations appear as a correlate to this process of urban region development.

This engages with the last question addressed by the empirical research, namely the institutional environment towards integration in second-tier urban regions. Do the specific characteristics of second-tier urban regions create conditions for metropolitan governance opposed to the descriptions of core-periphery tensions, coercion and asymmetric relations around large capitals (Lefebvre, 1998; Feiock, 2007; Nelles, 2013), at the same time mitigating the difficulties of anchoring a regional integration project in polycentric urban regions lacking a leading city (Dieleman and Faludi, 1998; Lambregts, 2006)? Integration at the political and institutional levels is of great importance for second-tier urban regions willing to upscale their relevance in national debates and as economic actors, especially in countries where the capital plays a dominant role in these aspects. Investigating whether the distinctive features of second-tier urban regions are indeed acknowledged and seen as a positive force towards integration by their institutional actors is the task of chapter 9.



## CHAPTER NINE. The metropolitan idea: inter-municipal collaboration and integration in second-tier urban regions

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The empirical work in the previous chapters defined a set of distinctive functional, socio-economic and historical-demographic features of second-tier urban regions. The aspects explored exhibit correlated features which support the initial hypotheses of the study. These aspects are argued as important factors underlying integration processes, and the analysis discussed how their configurations can influence the need and ability of second-tier urban regions to engage in such processes. In general, the configurations detected suggest that these urban regions may enable their whole territory as an extensive city and shape a type of integration defined here as metropolisation.

The functional analysis showed that second-tier cities host comparatively fewer important urban functions than primate cities, but they are usually embedded in better served urban regions; as such, they have an added interest in capturing the array of functions available at that scale, which provides an incentive to pursue integration. But that functional spread turns the urban region into more than a 'hinterland' for the core and the socio-economic analysis added that second-tier urban regions are indeed more heterogeneous and diverse at smaller scales and less subject to core-periphery hierarchies than primate urban regions; therefore, their integration processes can rely more on the differentiation and interdependence between the components of an extensive city than on a hierarchical structure emanating from the core. Similarly, their history of formation shows long-term patterns of polycentric urban growth largely independent from core city dominance, via autonomous urbanisation processes across the region; this sets second-tier urban regions in a mode of development whose demographic and cultural characteristics may further affect their incentive to and ability for integration.

At this point, the emerging question is what second-tier urban regions actually do about this set of spatial features and integration prospects. Does the configuration of their territories also create specific conditions for governance aiming at greater integration? The term 'governance' is used here to denote flexible and networked structures of policy- and decision-making, as opposed to the term 'government', more related to formal and

hierarchical forms of authority applied to well defined territories. Considering the blurred boundaries of urbanised regions and the difficulties in setting up administrative structures fine-tuned with their varying functional and spatial structures, many scholars agree that 'governance' is a more appropriate term to qualify the tentative and temporary arrangements (MacLeod and Jones, 2007) which seek to govern them.

Several authors argue that integrated governance is crucial for the economic productivity of urban regions in general (Meijers et al., 2012; Ahrend et al., 2015; McCann, 2015), although little is known about exactly which economic factors are more influenced by integration. However, this study has advanced the argument that integration is even more important for second-tier urban regions, especially in countries with dominant capitals, as they become able to act in national debates and policy decisions as a large, single player of increased economic and political importance. Moreover, deeper integration affects a variety of associated factors whose complexity mobilises the urban region scale, such as coordinating transport and land use, jointly attracting investment and population, using more effectively the array of functional and economic resources available in the urban region, and implementing common strategic planning options. These factors may, in turn, overcome the barriers to the enjoyment of the benefits of increased size and functional mass and diversity. These are key benefits for second-tier urban regions and are embedded in the extensive city concept. Therefore, integrated policy and action is particularly important in second-tier urban regions.

As suggested earlier, the features of these urban regions suggest potential conditions for integration strategies quite unlike those present in primate urban regions and polycentric urban regions. In the absence of a formal metropolitan government structure, these conditions are shaped by inter-municipal collaborations, which become the key driver of integration strategies. Such collaborations are highly influenced by the shape and type of relations between municipalities. Several authors have analysed the difficulties of achieving integration in urban regions around a dominant primate city, due to the perception of asymmetric political relations and economic gains caused by the excessive social, economic and demographic contrasts among jurisdictions (Lefèvre, 1998; Feiock, 2007; Andersen and Pierre, 2010). On the other hand, integration strategies in polycentric urban regions are hampered by the lack of a leading city acting as a powerful

actor that brings other stakeholders together, and providing a sense of shared cultural identity and a geographical reference to the region (Dieleman and Faludi, 1998; Lambregts, 2006). The features of second-tier urban regions uncovered by this study suggest a configuration somewhere between those two models, which may set them in a unique position to enable a shared political space at the urban region scale and engage in successful collaboration strategies aimed at integration. Exploring whether this holds true is the task of this chapter.

Section 9.1 discusses the ways to conceive integration in urban regions and justifies the focus on inter-municipal collaboration in the three case studies. Section 9.2 sets out the barriers to integration uncovered by earlier research, both in primate and polycentric urban regions, and builds upon that knowledge to define the approach to the case studies. Section 9.3 provides the institutional background for inter-municipal collaboration in Porto, Bristol and Antwerp. Section 9.4 presents the findings, based on the study of local documents and interviews with municipal authorities; each sub-section covers a potential barrier to/factor of successful integration. Finally, section 9.5 provides a critical summary and conclusions.

## **9.1 The different forms of integration in urban regions**

Similarly to other areas of policy and research, second-tier cities also seem to be lagging behind in the debates about the ascendance of urban regions<sup>54</sup> as important policy players. This is because the role of urban regions, as the outcome of the territorial rescaling of power and state restructuring (Brenner, 2004), is often measured by their actions in competitive arenas of global reach, as “*spatial nodes of the global economy and as distinctive political actors on the world stage*” (Scott et al., 2001: 11). This focus on global competition reserved to a selected few has its roots in the functional and rank-based comparative framework that this study has initially refused. Offering a different outlook, this study will argue the importance of urban regions as integrated policy players as emerging mainly from the need to achieve governance capacity in issues that

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<sup>54</sup> More often known as ‘city regions’ or ‘metropolitan regions’ in most policy debates. To keep the consistency with the rest of the research, the term ‘urban region’ will be used in this chapter to refer to the same concept.

mobilise that scale (Nelles, 2013; Brenner, 2014). Governance capacity can be defined as (1) the ability to coordinate activity at territorial scales beyond individual jurisdictions, and (2) the ability of urban regions to be relevant actors in the definition of policies at other levels of power, both by speaking as a single, large player and by shaping those policies according to their interests (Nelles, 2013). This view of why integrated urban regions are important privileges place-specific contexts and intra-urban issues over the role played in global frameworks and inter-urban rankings. In this sense, it is closer to the theoretical approach about second-tier cities defended by this study, and relates more directly to the reasons why integration is important for second-tier urban regions.

The question whether second-tier urban regions are particularly prone to enable successful integration strategies will be addressed through the exploration of the nature of the relations between municipalities in Porto, Bristol and Antwerp, including their orientation towards either hierarchical and unbalanced or polycentric and interdependent relations. The option to consider this level of horizontal linkages as the main factor influencing the development of integrated governance strategies in urban regions, rather than the potential or effective institutional consolidation, emerges from one conceptual and one pragmatic argument.

### **9.1.1 Why look primarily at inter-municipal collaboration**

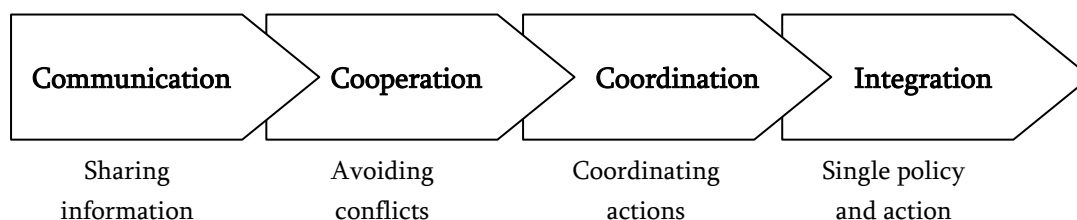
The first important issue is the need to reconceptualise what the ‘urban region’ is. Throughout this study, the concept of extensive urbanisation was advanced to stress that acknowledging urbanisation as a generalised condition of geographical territories is a more enlightening view of contemporary urban processes than the notion of ‘cities’, as spatially, culturally and historically bounded spaces, alongside a ‘non-city’ world beyond them (Brenner, 2014). In this sense, the concerns expressed by some researchers that policy-making for urban regions has an embedded core-periphery mentality and is still too concentrated on the interests and problems of core cities, are of great importance (Sieverts, 1997; Domingues, 2008; Harrison and Heley, 2015). Municipalities have existed for a long time, but the differences between their level of ‘cityness’ have too often corresponded to discrepancies in power, and resulted in institutional arrangements

where core cities had a privilege over other territorial actors (Nicholls, 2005). Furthermore, many urban region conceptions formalised into a 'metropolitan government' with power over individual municipalities (Lefèvre, 1998) suffer from a city-first bias, which attributes either 'locomotive' or 'carriage' roles to core cities and other areas (Harrison and Heley, 2015).

This makes the consideration of inter-municipal collaboration as a key driver of urban regional policy all the more relevant: municipalities, or local authorities, are abstract spatial jurisdictions whose boundaries can cover all kinds of geographical territories, including 'urban', 'suburban', 'rural' or 'natural'. In this sense, conceiving the municipality, whatever the nature of its territory and forms of urbanisation, as a key unit of debate within an urban region, and stressing that, in principle, all municipalities can appear as equally powerful partners in an integrated governance arrangement, is a way to balance that arrangement and reduce *a priori* core-periphery hierarchies.

The second, and more pragmatic, reason why inter-municipal collaboration is privileged in this analysis is that none of the three case studies has a formalised institutional level of government at the urban region scale. That absence turns inter-municipal collaboration into the main – or only – driver of integrated governance strategies (Hoyler et al., 2006). An implication of such a regime is that municipalities are free to produce temporary, partial and overlapping networks, which change according to the policy area and the objectives of the partnership, introducing greater complexity and fragmentation into the whole, but also allowing greater flexibility and tailor-made designs for specific initiatives (ibid.; Andersen and Pierre, 2010). Another question is whether urban regions have an additional incentive for consolidation, namely the pressure of central governments or European authorities to form innovative ways of cooperation. As we will see, those pressures exist but vary in direction and intensity among the three case studies. In summary, the absence of formal 'metropolitan governments' and presence of external pressures encouraging joint strategies turns Porto, Antwerp and Bristol into privileged places to observe how governance capacity depends on the strength of municipal partnerships (Nelles, 2010).

In this context, the term ‘integration’ applied to urban regions does not necessarily mean institutional consolidation as a single metropolitan government or a reduction in the number of jurisdictions, as advised by the OECD (Ahrend et al., 2015). ‘Integration’ is rather conceived as the last stage of the ‘collaboration continuum’ proposed by Stead and Meijers (2009), in which collaborative initiatives are developed and aimed at specific outcomes, with no need for a definitive institutional framework but an interest in building a single and strong policy actor for specific purposes. These initiatives start at the level of communication and advance through cooperation and coordination, before achieving the final stage of integrated policy and action (figure 9.1).



**Figure 9.1** – The increasing collaboration continuum (Stead and Meijers, 2009; layout above adapted from Rayle and Zegras, 2013).

## 9.2 Factors of inter-municipal collaboration

In contexts where inter-municipal collaboration is the main driver of integration of urban regions, issues involving the formation of voluntary networks of interdependent actors become more prevalent than elsewhere. This is broadly the preference of the ‘new regionalist’ approach to governance (Kantor, 2008; Nelles, 2013). This perspective posits that a variety of networks with different interests, policy goals and geographical scopes can emerge in urban regions and engage in temporary forms of cooperation, without a definitive institutional consolidation. The approach opposes both the ‘metropolitan model’ (Lefèvre, 1998; Nelles, 2013), insisting on a single political authority for the city region, with legitimacy emerging from direct elections and autonomy from other levels

of government<sup>55</sup>, and the ‘public choice’ approach, which advocates that fragmentation into small units of government will enhance competition, allow meaningful decisions by citizens and firms about their preferred jurisdiction, and generally improve the delivery of services (ibid.)<sup>56</sup>. As usual when two opposing and not very communicative models coexist (Feiock, 2004), the more recent new regionalist approach is a synthesis of both, as it does not demand a rigid metropolitan government, but privileges cooperation, coordination, and ultimately integration, over fragmentation and competition (although the latter aspect may be present to a degree - see Feiock, 2004).

### **9.2.1 Barriers to collaboration in primate urban regions: asymmetric relations**

According to Feiock (2007), the decision to cooperate is a rational choice, in which actors compare the transaction costs with the potential benefits. This is known as the institutional collective action model. Andersen and Pierre (2010) add that the cost vs. benefit balance cannot be assumed to stay the same every time the same actors are involved, but changes according to the nature of the task. In general, municipalities collaborate more when they have a perception of mutual symmetrical relations and can anticipate joint gains emerging from the collaboration. A sense of interdependence also contributes: municipalities are more likely to collaborate when they accept that they cannot solve a problem or define a strategy on their own.

However, Feiock (2007) adds, no choice is truly rational; information is imperfect and preferences are inconsistent. This leads to what he calls ‘second generation’ models of collaboration, in which context – geographical, political, thematic – plays a role. Context changes perceptions, by definition subjective, which in turn influence the willingness to take risks and the anticipation of gains. Context can be defined by the nature of individual actors and the shape of their mutual relations (ibid.) and Feiock provides an example: economic, demographic and social homogeneity is positively related to the likelihood to collaborate. In urban regions with greater homogeneity among actors, interests are more likely to be uniform and nobody is in a dominant

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<sup>55</sup> The literature about this approach is plentiful. An early summary is available in Lefèvre, 1993.

<sup>56</sup> Literature about the public choice approach is equally plentiful, especially in North American research. Its origins are usually traced back to Tiebout (1956) and Ostrom et al. (1961).

position which permits either imposing the distribution of benefits, or else exiting the negotiation. Excessive heterogeneity hampers integration in urban regions dominated by primate cities. Asymmetrical power relations make municipalities less willing to collaborate and “*municipalities in the position of dominant central city often face particular barriers*” (Rayle and Zegras, 2013: 871). This is even more important in the absence of a city-regional government defining this distribution and in competitive contexts such as the United Kingdom, where urban and regional policy is driven by “*a process of deal-making founded upon territorial competition*” (O’Brien and Pike, 2015: R14) and equitable distribution is not necessarily a policy goal.

Boudreau et al. (2007) add a cultural dimension to the problem of imbalance in urban regions, by stressing how the cultures of the ‘old downtown’ and the ‘metropolitan region’ in Canadian urban regions could not be more different. This cultural gap is reflected, among other factors, by the political preferences of the population, often associated to greater conservatism in ‘suburbs’ and left-leaning tendencies in socially mixed core cities (Hoffmann-Martino and Sellers, 2005). This affects the profile of local authorities answering to specific electorates and further impedes joint governance.

Empirical research supports these views. In his early survey of metropolitan governance in Europe, Lefèvre writes about the failure of “*technocratic projects dominated by the central cities*” (1998: 21). He accepts that the most successful processes were led, or strongly supported, by the central cities, but only when they were ready to make concessions. This could include redesigning their administrative boundaries (which usually finds popular opposition) or accepting a role in the collaborative structure which did not fully reflect their demographic or economic weight in the urban region. Interestingly, this ‘first among equals’ process has been easier to implement in second-tier cities: Lefèvre gives the examples of Bologna, Stuttgart and Rotterdam.

### **9.2.2 Barriers to collaboration in polycentric urban regions: leadership and identity**

The argument by Lefèvre about the need for leadership but not dominance by the central city is important to explain why integration is also difficult in ‘polycentric urban regions’ (PURs) consisting of geographically proximate urban centres of similar size and economic



importance. They tend to be demographically and economically more homogeneous and so do not face the problems of primate city dominance or cultural gaps, but research has offered two explanations for the barriers to integration witnessed in this type of urban region. The first comes from the lack of leadership and focus and the second from the lack of a clear identity at that scale.

Post (2004: 79) writes that “[s]trong policy leaders can be instrumental in overcoming opposition to local intergovernmental cooperation”. They act as a unifying force among heterogeneous populations and, by extension, other local political leaders. They may have privileged access to policy-makers at higher levels of government and thereby persuade them to obtain more benefits to the urban region. Leadership can also work as a linking mechanism between actors (Bryson et al., 2006), acting as a “*broker with sufficient power and connections to bring stakeholders together and introduce the idea of collaboration*” (Rayle and Zegras, 2013: 871). The fact that this type of leadership emerges more often in a core city is not strange at all. Large and economically important municipalities usually have greater human, technical and financial resources, which they use to launch initiatives and develop projects that smaller centres cannot lead (Lefèvre, 1998). They usually elect higher profile mayors with more important positions in national political parties and closer ties to higher levels of government. This leadership role by a city which stands out from the rest is absent in a PUR system.

The second important aspect is identity. Dieleman and Faludi (1998) argue that traditions of urban governance in the different cities of PURs are ‘worlds apart’ and no common language has been implemented that all actors can relate to (Hajer and Versteeg, 2005). This fragmentation makes cities “*profile themselves as separate entities*” (Dieleman and Faludi, 1998: 370) and reduces their organising capacity when compared to cities with a single administration. Lambregts (2006) asks how ‘metropolitan qualities’ could be added to the Randstad – or, in the words of this study, how to engage in a process of metropolisation leading to the emergence of an ‘extensive city’. The perception of those qualities – measured by the formation of agglomeration economies – appears lower than in “*real metropolises such as Paris, London, Madrid and Milan [...] turning the Randstad into a ‘potential’ metropolis at best or a ‘powerless’, disjointed collection of middle-sized cities at worst.*” (Lambregts, 2006: 119). The OECD report on the Randstad

(2007) confirms the lack of a shared identity beyond the imagination of policy-makers, and people consistently identify themselves with a specific city.

A leading city carrying a strong identity and providing a cultural and geographical reference to the larger urban region resonates with the argument by Nelles (2013) that, alongside the institutional system and the opportunities for collaboration, what matters for successful urban region integration is “*the strength of the metropolitan idea*” (Nelles, 2013: 1359). She writes that there is no clear evidence that institutional and opportunity factors are the sole predictors of the strength of governance partnerships. Following Feiock (2004; 2007) and others, she agrees that “[t]he decision to engage in intermunicipal cooperation – whatever its form – is based on the political will of local authorities” (Nelles, 2013: 1359), but that willingness is partly carried by the number and quality of the networks that emerge across the urban region. The more networks, the more ‘conduits’ to transmit ideas, information and action; the quality of the networks, in turn, depends on the ability of leaders to forge links between them and on the territorial scale which they are able to mobilise. Coalitions operating across the urban region tend to have specific thematic interests – e.g. tourism, environment, investment, education – and municipalities are “*compelled to coordinate their plans and join the partnership in order to remain relevant in that policy area*” (Nelles, 2013: 1361). For Nelles, this is embodied by the concept of ‘civic capital’, and urban regions with “*greater civic capital are more likely to produce stronger governance partnerships*” (ibid.: 1360).

Lack of civic capital may be a factor hampering integration strategies in polycentric urban regions which do not share an identity and a sense of belonging to a common territory. Strong and inclusive networks emerge precisely in places sharing important cultural and historical references, as common problems, objectives and interests are made evident across the urban region and more easily agreed upon. Bridges and bonds across administrative territories are also more easily built and stabilised. Otherwise, competing conceptions of benefits and priorities will emerge and their conflict may be difficult to resolve (Healey, 2009). Indeed, a track record of cooperation and mutual knowledge is important to feed further collaboration in urban regions, as argued by O’Brien and Pike (2015) in their defence of the ‘uniqueness’ of the Manchester case, which may not be replicable in urban regions with no history of close relations.

Greater civic capital is likely to emerge in places where the presence of an important core city provides a shared historical and cultural identity to the larger territory. Most authors quoted above agree that the ‘strength of the metropolitan idea’ needs a common system of references that allows different places to recognise a shared context and work out a ‘script’ that adds enthusiasm about the future and holds the network together: Hajer et al. (2013) tell the story of the implementation of this concept fuelled by the imaginations surrounding the core city of Amsterdam. Place names are clear illustrations of this: *Euroregion*, *Mitteldeutschland* or *Randstad* are policy names which lack correspondence with the public imaginary, unlike large urban regions which kept the name of their core city, like Manchester, Milan or Lyon. As Nelles writes, “[c]apacity cannot be attributed to an abstraction” (Nelles, 2013: 1353).

### 9.2.3 Situating second-tier urban regions: research approach

The hypothesis emerging from this discussion is that second-tier urban regions with the characteristics uncovered by the preceding chapters have the potential to mitigate most problems affecting both primate and polycentric urban regions. They can increase the likelihood of collaboration based on rational choice factors, by having a less dominant core city, a more developed sense of interdependence and horizontality among actors, and less cultural and socio-economic contrasts between core and periphery. They can also increase the likelihood of collaboration based on leadership and identity factors, as a core city able to mobilise its greater resources and lead change will still exist; such a city will have sufficient historical and cultural importance to cast its identity upon the urban region and thereby anchor the ‘metropolitan idea’ on a strong and shared focus. This hypothesis will be explored for the urban regions of Porto, Bristol and Antwerp and the findings will be organised around the following issues:

- Assessing the context for inter-municipal collaboration:
  1. Is a formal ‘urban region’ government absent and do the main collaboration frameworks have municipalities as key units?
  2. Are there external pressures towards joint strategies and integration and do municipalities create networks in response to them?

- Assessing whether ‘primate urban region’ barriers can be avoided:
3. Are the political cultures of the core city and the peripheries sufficiently close to permit the development of a common set of interests and goals?
  4. Is there a sufficient level of homogeneity among actors and a prevalent perception of symmetric relations and potential joint gains through integration?
- Assessing whether ‘polycentric urban region’ barriers can be avoided:
5. Is there a core city actor acting as a regional leader and does the core city mobilise its resources to inspire and lead change?
  6. Is there a perception across the urban region of belonging to a shared territory and do the municipalities waive their autonomous identity and specific interests to join partnerships and pursue goals in the interest of the urban region as a whole?

As discussed in the methodological chapter, the nature of the questions above and the ongoing changes of the relational contexts in the three case studies recommend an analysis more based on the different perceptions of the stakeholders about their relations than on the measurable outcomes of specific strategies or the outputs of specific projects. Therefore, the key sources of data for this chapter are semi-structured interviews with high-level officials (mayors or councillors) in municipalities in the urban regions of Porto, Antwerp and Bristol. The perceptions about the research problem are likely to be different in core cities and other areas of the urban region, so interviews were conducted with representatives from different geographical contexts. The response rate was positive and most respondents were very accessible. The exception was Bristol, where a core city councillor was readily available, but, despite several attempts, access to representatives from the neighbouring authorities was not possible on time. Requests were either unanswered or refused due to too many commitments. In any case, the lack of complementary views about the Bristol urban region was partially compensated by a discussion with an analyst from an urban policy think tank and a search for written accounts about the different perceptions of integration processes.

### 9.3 Background: institutional systems and inter-municipal collaboration

#### *A flawed institutional model hampering integration in Porto*

In Porto, all the respondents criticised the existing model of metropolitan governance and regretted the lack of regionalisation process. The Portuguese model is characterised by little devolution of powers, with no formal structure between the national and municipal scales. Sectoral decisions by central government offices, in areas such as transport, health, education, etc., affect the structure of the urban region but do not mobilise local knowledge and actors for a better articulation with territorial realities (Oliveira and Breda-Vazquez, 2011). In the 1990s, the government implemented 'metropolitan authorities' for the two largest urban areas, Porto (AMP) and Lisbon (AML), but the model is no more than a free association of municipalities, with no additional political authority and a very limited budget.

The lack of an urban region government turns inter-municipal collaboration into the main driver of integration processes. The officials interviewed admit that this is the only way to mobilise local knowledge, but they do not have the budgetary or political mechanisms to override place-blind central government decisions or parochial trenches built by individual municipalities. A metropolitan authority meeting is, in their view, a competition between 17 mayors, each trying to bring greater benefits to their own territory, regardless of the larger context. It is very rare, and politically sensitive, for a mayor to explicitly propose an initiative to serve the needs of other municipality, even if evidence points in that direction. They unanimously see the current model as flawed.

The remaining option is to pursue smaller, informal and specific partnerships, built according to needs. The respondents welcome that freedom to choose partners and purposes, and gave examples of successful projects emerging from that model. However, they accept that such networks are fragile and temporary, and often unable to address the desired scale. To make urban region coordination more effective, all respondents would welcome a powerful metropolitan authority – as discussed in the methodology, the sample is obviously biased in this respect. The small successes that they are achieving with informal partnerships are being used as flagship projects to convince other partners and the government of the need to create a better model for the urban region.

Core city officials were keen to mention the new generation of mayors, who are questioning old models and creating opportunities for change, but smaller and more remote municipalities do not recognise that potential yet. On the other hand, they are receptive to merging municipalities, thereby forcing mayors to answer to a larger electorate and giving their territories greater critical mass. Pressures for creating that critical mass and coordinate activity come mainly from the framework of attribution of regional European funds, managed by a Regional Coordination Commission (CCDR), which is, despite its name, a centrally appointed institution void of political power.

Critical mass is already present in the core city and the core MUA municipalities, which do not favour the merger of municipalities but insist on a metropolitan authority. In their view, this would allow the urban region to compete for more EU funds and to act as a stronger player when dealing with central government. The core city officials mentioned the example of Manchester, now visiting Whitehall “*not to ask for anything, but to offer and warrant a complete solution*” (Councillor at Porto municipality, interview, 2015). A metropolitan authority would also give an impulse to institutions which were created by law but never implemented (such as the metropolitan transport authority) and provide long-term stability to decisions which can now be easily reversed by a simple change of executive in any given municipality. They give the example of public transport to illustrate how the government indirectly sabotages their integration efforts, by restricting the political and financial mechanisms they can use, and then removing important regional policies from their power with the argument that the municipalities are not doing a good job in managing them. They see the central state as explicitly hampering their incentives for integration.

*Is the urban region concept not acknowledged in Antwerp?*

The proximity to other important cities and the long history of entrenched municipal autonomy in Flanders (Grosjean, 2010) make the definition of an ‘Antwerp urban region’ apparently less important for the municipalities in the area. The Flemish government is campaigning for building ‘collaborative clusters’ and even merging municipalities (Agentschap Binnenlands Bestuur, 2014) but, unlike Porto, the respondents did not fully

acknowledge the concept and seemed to think of the territory in terms of autonomous municipalities, engaging in cooperation 'as-and-when-needed'. In the absence of an agreed definition of an urban region and any form of governance at that scale, the municipalities build ad-hoc networks for specific purposes, but do not seem to yearn for a more developed model of integration. They accept that they cannot fulfil their obligations without collaboration, but limited to immediate needs, such as integrating the municipal police and fire services. The officials interviewed recognise the lack of clarity of this system, with many overlapping and inefficient networks and institutions. Like in Porto, more remote municipalities favour the idea of merging small jurisdictions and those closer to the core city do not. However, they do not welcome integration with the core city or a metropolitan authority including Antwerp.

The core city has a history of detachment from the rest of the territory and the socio-cultural contrasts between both are stronger in this urban region than in Porto or Bristol. Forms of collaboration that include the core are incipient, thematic and involve a limited number of partners. Recently the Flemish government started funding a joint spatial planning initiative to respond to population growth estimates expecting a spill-over from Antwerp into the surroundings. However, this attempt at coordination is only concerned with the housing and infrastructure aspect and only considers the municipalities in the immediate periphery of the city. The boundary between the first peripheral ring and the rest of the urban region assumed by the plan is not justified by demographic or morphological factors, but the core city officials argue that gathering 13 municipalities at this stage is already an unprecedented effort, very hard to manage given the traditional relations of rivalry between places in Flanders.

Some of the work that would be carried out by a metropolitan entity is covered by the province, although its geographical scope does not correspond to the different functional urban areas that researchers and policy-makers have proposed. Notably, the concept of the 'Flemish Diamond' has proven to be a normative concept with little meaning for the daily workings of the region (Albrechts and Lievois, 2004) and was not referred at any point of the interviews. The province is responsible for strategic planning, inside the hierarchical framework of the larger 'spatial structure plan' for Flanders (1997; 2004). It can be seen as the main source of integration initiatives, but its political

authority reduces the incentive for municipalities to consider the urban region scale and form their own partnership initiatives. In addition, recent decisions by the Flemish government have greatly reduced the planning powers of provinces in the main cities. Antwerp is now relatively free from provincial constraints, but the surrounding municipalities are not, creating a greater distance between the core and the periphery and reducing the opportunities for collaboration. The ten strategic spatial plans currently being implemented by the province (Provincie Antwerpen, 2015) build several networks between municipalities, but they all exclude Antwerp.

### *A process of territorial integration taking shape in Bristol*

The Bristol urban region has a history of changing boundaries. The ancient city status of Bristol was stripped in the 1970s, when the government created the county of Avon and then restored in 1995, when the county was separated again into four unitary authorities. To continue the work done at the Avon scale in issues like transport and spatial planning, the West of England partnership was created as a joint committee of local authorities working in free association, but lacking an elected mayor or a combined authority with powers over the individual local authorities. The partnership was expanded to include businesses and transformed into the West of England Local Enterprise Partnership (LEP), following efforts by the central government for greater devolution of power. Like other English Core Cities, the partnership eventually signed the first wave of City Deals in 2012, a tool designed for city regions to obtain further funding and policy-making powers and design their own economic growth strategies.

Inter-municipal collaboration and integration strategies in Bristol now happen mostly through the LEP and City Deal models. According to O'Brien and Pike (2015), City Deals effectively enable decentralisation and force city regions to work together; in addition, by asking for complete strategic plans, they mobilise local knowledge rather than imposing sectoral and place-blind decisions from Whitehall. Among their several problems, such as the competitive nature of spatial development and the informality of the networks created (ibid.; Pike et al., 2013), City Deals may be biased in favour of urban regions with a track record of collaboration, who can be taken more seriously as a



strong and consistent player when presenting their claims. According to the respondent in Bristol, convincing the government of their reliability in this aspect is a great concern of the LEP board. The Manchester model is invariably taken as a reference, as the urban region has a long track record of successful collaboration and formation of strong institutions (Harding et al., 2010), including a combined authority and a metropolitan mayor. This is the model favoured by the central government, and their latest positions strongly insist on governance reform as a key condition to embark in a City Deal (see the Chancellor's speech, 14 May 2015; HM Treasury, 2015).

In summary, and in contrast to the negative impact of central government in Porto and the apparent indifference to the urban region scale in Antwerp, Bristol suffers strong external pressures for integration. But these pressures have not yet been responded by the creation of a stable institution which can capture the powers being transferred. The core city official argued that the region's high economic performance is an advantage in the discussion with the government, as its potential for growth is recognised. However, the current stage of governance reform and the inexistence of a combined authority might be the region's strongest handicap (Harrison, 2015). According to a recent report, *"plans for further devolved powers rely on Bristol and the surrounding authorities coming together in a combined authority and agreeing to a mayor for the entire city-region"* (Clarke and Jeffrey, 2015: 3).

## **9.4 Municipal relations and shared identities in second-tier urban regions**

### **9.4.1 Proximity of political cultures**

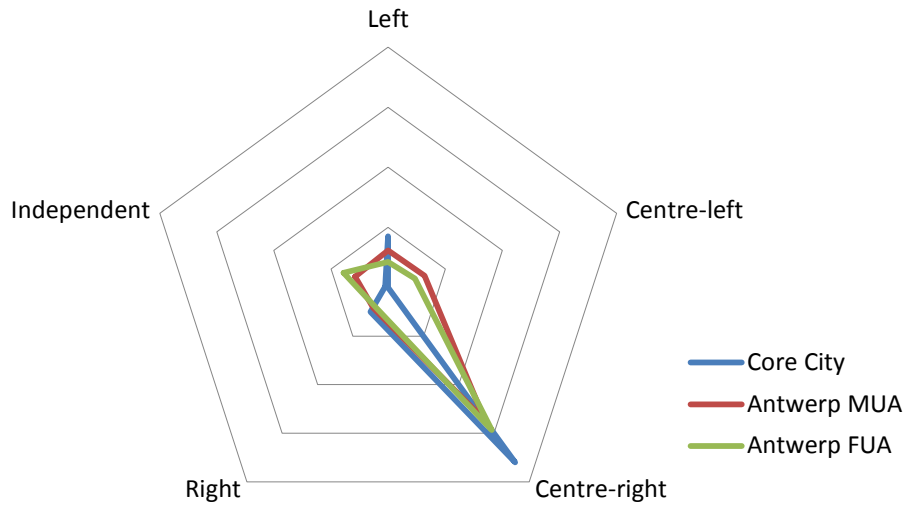
Earlier research has noted the difference of political culture between core cities and their urban regions, which is often expressed by the contrasting political preferences of the population (Boudreau et al., 2007; Hoffmann-Martinot and Sellers, 2005). As discussed above, the approximation of political cultures is argued as a factor that facilitates collaborative initiatives. Antwerp, Porto and Bristol illustrate three different shapes this approximation can take and the officials interviewed had different takes on the importance of that factor as a step towards integration.

Antwerp is a case of increasing uniformity across the urban region. The core city officials interviewed told how the historical contrast between a conservative periphery and a left-wing core city had made political collaboration difficult, with mayors from different parties answering to contrasting electorates and lifestyle ambitions. This partly changed in the 2012 elections, when the conservative nationalist N-VA party won in most municipalities, as well as the province. 22 out of 24 municipalities in the core MUA and 20 out of 26 in the remaining FUA now have centre-right mayors.

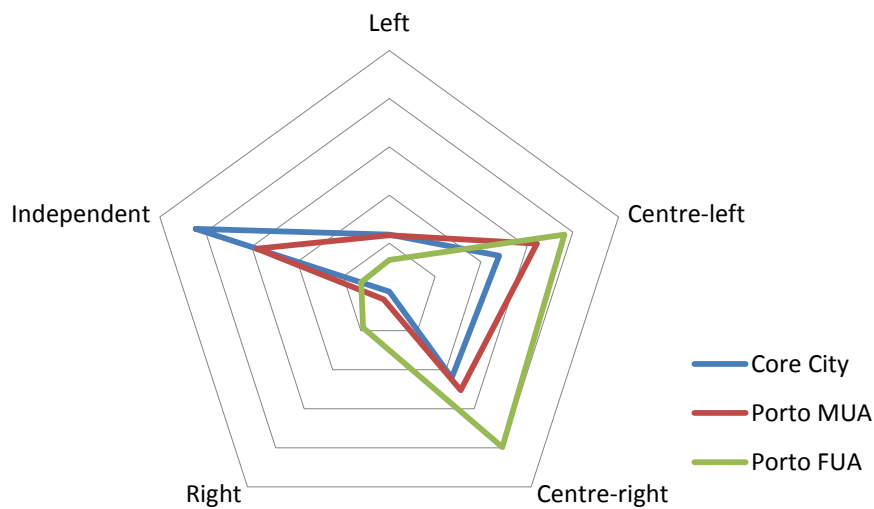
Porto is a case of increasing political proximity in the core agglomeration, not followed by the rest of the urban region. Independent candidates surprisingly won the 2013 local elections in several Portuguese cities, including Porto and its neighbouring municipality Matosinhos. Elsewhere in the region, the dominance of traditional political parties was kept. Interestingly, the first new network formed in the urban region, the Atlantic Front, involves precisely the executives from Porto and Matosinhos and the contiguous city of Vila Nova de Gaia, where independents came second with 23% of the votes. This association of municipalities, all part of the core MUA, was designed to *“fulfil aspirations that the AMP cannot achieve”* (councillor in Porto, interview, 2015).

Finally, Bristol represents a more pronounced gap between the political cultures of the core city and the surrounding region, in the sense that even the formal institutions governing the different local authorities are different. Bristol is one of the few English cities with a directly elected mayor, while the other three local authorities are still governed by an assembly of councillors. Furthermore, the mayor of Bristol is an independent and the city has a balanced distribution of councillors between left, centre-left and centre-right parties, while the three surrounding local authorities are dominated by centre-right forces.

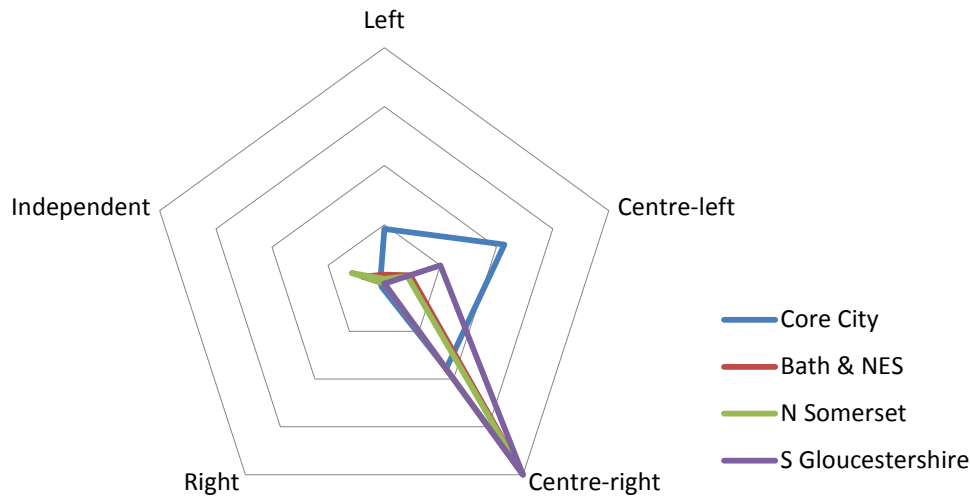
The radar charts below show the distribution of the political spectrum in the different parts of the three urban regions, illustrating the overall uniformity in Antwerp, the contrasts between the core city/MUA and the FUA in Porto, and the differences between the core city and the remaining urban region in Bristol.



**Figure 9.2** – Distribution of political preferences in the Antwerp urban region (core city, core MUA, remaining FUA) according to the results of the 2012 local elections (source: author's research over data from Agentschap Binnenlands Bestuur).



**Figure 9.3** – Distribution of political preferences in the Porto urban region (core city, core MUA, remaining FUA) according to the results of the 2013 local elections (source: author's research over data from Pordata/FFMS).



**Figure 9.4** – Distribution of political preferences in the Bristol urban region (core city, and surrounding local authorities) according to the current composition of councils (source: author’s research over data from local authority websites).

The different ways in which political proximity clusters together can influence the relations between municipalities. In particular, the perception of the importance and impacts of the political context in collaboration tends to be different in core cities and smaller municipalities.

The weight given to that factor was stronger in Antwerp than elsewhere. The core city respondents attributed the first steps of an integrated response to infrastructure and housing expansion to the recent political uniformity of Antwerp and its surrounding municipalities. They think this factor has reduced the political gap between the core city and its neighbours and enabled collaboration which would not happen otherwise. This view is not shared by smaller municipalities, which argue that political uniformity, helped by the fact that the mayor of Antwerp is also the national head of the N-VA party, is not producing greater willingness to collaborate due to the position of political dominance taken by the core. This is manifested in the very expressive electoral results of local parties formed in small municipalities. Such parties tend to have local concerns and strive for local autonomy, in the tradition of parochial rivalries typical of Flanders (Grosjean, 2010). In any case, they have mostly built mayoral coalitions with the N-VA and this is why the political spectrum in the urban region is now practically the same.

It is unclear whether the contrast between the renovation trend led by independents and the preservation of the political status quo amounts to the actual creation of two political fields in the Porto urban region. The respondents did not explicitly admit that, although they acknowledged that both tendencies happen to cluster geographically in the core MUA and the FUA. What emerges from this clustering is a different perception in the core city and more remote municipalities, similarly to Antwerp. Core city officials stress how political renovation has brought people together and enabled collaboration which had been blocked for a decade. Respondents from smaller towns do not recognise that new proximity and still see mayors entrenched in their own territories. In this sense, initiatives like the Atlantic Front may signal a further detachment between the political cultures of the core agglomeration and the rest of the urban region. While the mayor of Porto has argued that “*this association is not against anyone else in the AMP*” (Câmara Municipal do Porto, 2014), officials and media elsewhere in the urban region were quick to point out the ‘centralism’ of the new network (Mendes, 2013) and the risks of leaving the AMP behind.

The case of Bristol, with different formal structures governing the core city and the other local authorities, presents a deeper challenge to the approximation of political cultures across the urban region. The figure of a mayor is associated with personal leadership and charismatic qualities, illustrated by the views of how Bristol elected an independent who embodies the city’s “*sense of exceptionalism*” (Byrne, 2014). By contrast, the figure of the council is associated with collegial decision-making and greater proximity to the population. This model is popular in England and the ironic distrust as to the mayoral system is clear in media reports in 2012 about how cities said “*no to a Boris in every city*” (Dyson, 2012). This gap may be difficult to surmount. According to the city councillor interviewed in Bristol, there was some confusion surrounding the proposal of a ‘strategic mayor’ for the LEP area, due to the suspicion by the local authorities that the mayor of Bristol, being the only ‘mayor’ around, would eventually occupy that position. The city of Bristol had to take extra care not to insist too much on that proposal to appease fears of greater core city dominance.

#### 9.4.2 Homogeneity and symmetry of relations

The preliminary analysis in chapter 5 mentioned the demographic balance in the Porto, Antwerp and Bristol urban regions, as core cities do not dominate in terms of population and the MUAs and FUAs are dense and populated urban territories. However, the fewer secondary MUAs in Antwerp and the relative size of municipalities show that the Portuguese and English cases are more able to ensure greater homogeneity between jurisdictions as a positive factor of collaboration. In fact, Antwerp has a population of 493,517, against only 81,927 in the second largest municipality, Mechelen. The other 48 small municipalities in the ESPON-defined urban region vary between 9,000 and 40,000 inhabitants. By contrast, Porto is not even the most populated municipality in the urban region (240,000 against 302,000 in Vila Nova de Gaia), with several other municipalities well over 100,000. Bristol has a population of 442,500 and is surrounded by three large local authorities with 180,000 to 270,000 inhabitants.

Strong heterogeneity creates a problem for the perception of symmetrical relations in Antwerp. While the core city stresses the commitment to bring other actors into an interdependent collaborative structure, they clearly stand as the dominant partner due to sheer size: *“if one community takes some measures, it has an effect on its neighbours. This is true for Antwerp because if we are really pushing something through the effect will be quite large.”* (official at Antwerp municipality, interview, 2015). This discrepancy is strongly felt by the other partners, who fear the dominance ambitions of Antwerp. Interviewed mayors both in the core MUA and in the FUA describe Antwerp as a dominant city. Despite the formal equality between municipalities as political entities, the core city is perceived to have an effective power over smaller places and the last word in the common decisions. The mayors criticise the approach of Antwerp in joint debates as ‘shut up and learn’, but seem to consider that a *“fact of life”* that derives from the ‘natural’ location of power, functions and economic activity (mayor of Antwerp FUA municipality, interview, 2015). Peripheral areas resist by building more homogeneous networks between them to expand the scale of their activities, avoid dependence and create a larger interlocutor to confront the ‘intimidating’ core city.

The fact that the dominance of the core city over the urban region is seen as quite normal and unavoidable in Antwerp supports the suggestion above that the ‘urban

region' concept is not part of the public imaginary or the political debate and relations occur under an embedded core-periphery ideology, in which power and the economy cluster in the centre and are gradually dissolved into the periphery. This is not consistent with the findings about the current configurations and mode of development of second-tier urban regions. Historical factors and unchanged power and scale relations are likely to conceal the actual spatial structure of urban regions and distort its recognition.

With fewer scalar contrasts between municipalities, Porto and Bristol seem much more aware of the interdependence of the urban region as a whole. As chapter 6 has shown, second-tier cities have a more balanced spread of urban functions than capitals, and core city respondents in Porto and Bristol unanimously stressed how so much important economic activity lies beyond their borders and how much they need the urban region scale to prosper. The contrast with Antwerp is significant and the two cities state their commitment to build more symmetrical relations with their partners. Officials in Porto insist that they need the region – the airport, the port, the exhibition fairs, the industry, the logistics, are all outside the city borders. The new executive described a very quick progression from the 'communication' to the 'integration' stages of collaboration (Stead and Meijers, 2009) in several joint projects, arguing that waiving leadership and accepting partnership roles below their economic or demographic weight was crucial to project the idea of symmetrical relations between actors, as suggested by Lefèvre (1998). The mayor of a smaller neighbouring municipality agrees and recognises the 'intelligence' of this approach. He anticipates a tendency for increasingly symmetrical relations, with nobody feeling the excessive dominance of Porto. Both have attempted a flattering comparison to Lisbon, where secondary centres, in their view, need to confront core city dominance and thereby strive for as much autonomy as possible.

The respondents in the city of Bristol presented broadly the same discourse, stressing how much of the economic power of the region sits outside the city – namely in cross-boundary places that people would identify as Bristol, but in fact are not. This is the case of Airbus, Rolls Royce, British Aerospace or the University of the West of England, all in South Gloucestershire. In policy areas like tourism, complementarity, interdependence and joint growth with Bath was considered essential. To mobilise that scale, authorities in Bristol also accept that they “*want to be an equal partner [...] we are*

*very keen not to dominate but to have a kind of sub-region that works well together*" (councillor at Bristol city council, interview, 2015). The respondent agreed that primate cities may have greater difficulty in achieving this balance, as they are culturally more distinct from their wider regions and, being the seat of governmental and financial power, there is an incentive to centralise decisions and resources.

An important factor influencing the perception of that strategy is geographical contiguity. Bristol authorities believe that the logic of working together under symmetric relations is more evident when economic activity occurs across an uninterrupted urban fabric, despite the existing administrative boundaries. They add that the city has a quite substantial critical mass on its own, namely in higher education and culture, which may affect the priority given to the different areas designed for the LEP – work is more advanced in core city areas than in further away locations, such as the Weston-super-Mare Enterprise Area. The same happens in Porto, where spatial continuity is argued as the *raison d'être* of the Atlantic Front and other joint projects. The officials interviewed in the core city and the MUA agree that a single urban continuum eventually dissolves asymmetrical relations and balances the gains of collaboration among municipalities. In their view, this partly mitigates the lack of a metropolitan authority. They argue that that scale of governance would be more important to find common logics with other places in the urban region; unlike the immediate periphery, it is not clear for the more remote municipalities what benefits will be transferred by tighter collaboration.

This may be the reason for the diametrically opposed view presented by the mayor of a small city in the Porto FUA. He stresses the weak relations between the core MUA and the rest of the urban region, blaming Porto for not promoting an 'urban region' vision. In opposition to the territorial evidence and the examples given by the other respondents, he asks why no important functions are outside Porto and why other places only capture the activity that the core 'expels'. Their attempts to engage in collaboration with Porto have allegedly failed due to the indifference of the core city: *"everyone in the region understands its leadership as the most relevant centre. It is not, regardless, a city which had the ability to move beyond its administrative boundaries. In my opinion, Porto is a small Lisbon."* (mayor at Porto FUA municipality, interview, 2015).



### 9.4.3 Core city leadership

There is a fine balance between ensuring symmetrical relations between partners and using core city leadership to provide an impulse to partnerships. While the perception of the symmetry dimension varies substantially among and within the three case studies, the leadership aspect is more consensual. Core city respondents in all cases mentioned the willingness to mobilise their substantial technical, financial and human resources to gather other partners and achieve results.

Porto described their role through the “*theory of the natural leader – someone that we just recognise as a leader even if not chosen or not wanting to be. If we apply this to cities we find the same logic*” (councillor at Porto municipality, interview, 2015). This is a ‘first among equals’ position, in which the leading partner gets to choose their role, which happens to be one of equality and horizontality: they establish the networks, mobilise the resources to support and finance them, but then retreat to a more secondary position in their implementation (Lefèvre, 1998). Like the symmetry aspect above, this approach is increasingly recognised by municipalities closer to the core. In Antwerp, as anticipated, core city leadership is stronger, with officials openly stating that they are able to pursue their own objectives and set the agenda for the urban region, due to their much larger resources. In their view, integrating other actors is always preferable, but the core city is ultimately capable of taking unilateral decisions. Bristol is in a more ambiguous position and, according to the councillor interviewed, waives pretensions to leadership, to reduce some “*suspicion*” (interview, 2015) by their neighbours about the city’s role in a future combined authority. Moreover, the urban region is made of only four large local authorities, in contrast to the municipal fragmentation in Porto and Antwerp, which arguably avoids that a single actor has much greater resources than others, although some differences are always present.

Such differences may be embodied by the charismatic figure of a core city ‘mayor’ and all the core cities have indeed quite high-profile and vocal mayors. The mayors of Porto and Bristol have similar features: they were elected as independent candidates, free from party loyalties; they managed to build cohesive cabinets with people from different political forces; they have a well-regarded previous professional background rather than being full-time politicians; they appear as embodying the personal characteristics that

make their second-tier city ‘special’; and their profile is associated with cosmopolitanism, innovation and political renovation (Minder, 2013; Duarte, 2015; Byrne, 2014). In their study about the impact of the mayoral system in Bristol, Hambleton and Sweeting (2015) write that the perceptions of urban governance have changed, namely in terms of an improved, more visible and influential leadership, with a more charismatic vision about the future. All of the above are arguably the features that matter for a city-regional leader (Post, 2004). However, these mayors have no formal powers outside their own jurisdiction, which restricts their capacity to lead urban region integration.

That capacity is well present in Antwerp. The city mayor is also the head of the N-VA party - which also leads the province and the Flemish government - and “*the most important man in Belgium*” (mayor of Antwerp MUA municipality, interview, 2015). This gives him access to and decision powers in broader scales of policy and the ability to align the priorities of his municipality with those debates. It may also give him some informal authority over the other N-VA mayors of the region. The problem, according to the smaller municipalities around Antwerp, is that the lack of urban region integration, even as a concept, and the strongly parochial politics may not bring the benefits of that alignment to their territories and may only favour the city of Antwerp.

#### **9.4.4 The strength of the metropolitan idea**

Inspiring a strong metropolitan idea, in the sense of cultural identification with a shared space at the urban region scale, is arguably the strongest argument for integration in Porto. All the respondents agree that Porto is the symbol of the region and the identity factor around which the willingness for integration congregates. They add that the city has successfully projected its image and has evolved into a ‘brand’ of worldwide recognition. That is particularly useful in areas involving international relations: firms located in the urban region tend to present themselves as being from ‘Porto’, and the tourism assets in most municipalities are advertised as specialised components (food, wine, history, etc.) of Porto tourism. The mayors of the smaller cities also recognise the advantages of profiling their municipalities as part of Porto rather than separate entities. In line with the findings by Nelles (2013) about places sharing strong identities, a variety

of networks structured at the urban region scale is championing a supra-local agenda. The development of a regional tourism strategy gathering all the municipalities in the region is a recent example, but organisations abound in several areas, such as industrial and commerce chambers and business associations. Universities and businesses have gathered to lobby for the 'Porto City Region' concept (Universidade do Porto, 2008). Another example is the Global Northwest Platform, an association of municipalities (including cities outside the 'metropolitan authority'), four universities and the national agency for business innovation, developing an agenda of investment and economic growth for a much larger urban region, aimed at global competition.

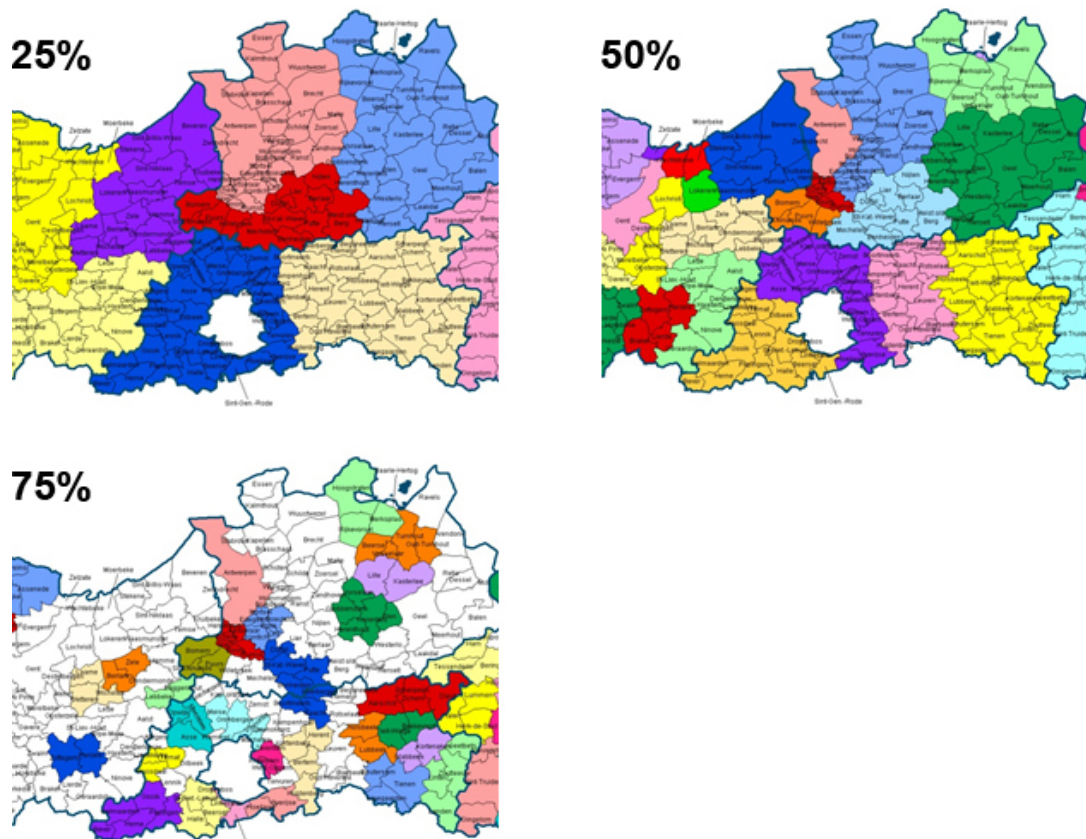
This sense of identity is not limited to the strategies of firms and institutions. The respondents also noted how the population in general is oriented towards Porto as a cultural focus. They argued that mobility "*puts us all in the same city*" (mayor of a Porto MUA municipality, interview, 2015), with shorter commuting times between different parts of the urban region than inside many large and congested cities. Core city officials add that this movement between places is not only practical but also bi-directional: unlike Lisbon, where peripheral inhabitants travel daily to the centre but people working and living in the core hardly need to leave, in Porto both peripheral and core city inhabitants may cross several municipalities in their daily commuting. In their view, this arrangement increases socio-economic diversity in smaller towns, reduces the hierarchy in the urban region (see the findings in chapter 7), and increases cultural proximity between places. In the words of a Porto city councillor, "*the apparent 'miracle' of recent collaboration efforts is the consequence of an emerging state of mind oriented to integration: we don't have to fight for this anymore*" (interview, 2015).

Like other aspects, perceptions change from core to periphery, with respondents from more remote municipalities feeling that the cultural and social sense of integration does not necessarily result into benefits for their population in more practical issues, like transport or health services. As mentioned above, they would welcome a metropolitan authority to help distribute those benefits. This absence is seen by all as the greatest obstacle to the transformation of the strong metropolitan idea into an operative tool of territorial development. But all respondents mentioned that they form a 'single large city' made of different parts: the mayor of a FUA municipality stated "*we want to be the*

*industrial district of Porto*” (interview, 2015), in reference to the former industrial area that was historically inside the city. Another mayor suggested a comparison to London before the implementation of the Greater London Authority: a set of adjacent ‘boroughs’ building a large city which is in great need of governance at that scale. Businesses, institutions and communities acknowledge the notion of the ‘extensive city’.

Despite the similarities of urban morphology, based on dispersed and continuous urbanisation, and institutional system, based on individual municipalities, the notion of the ‘extensive city’ as a space of shared identities seems absent in Antwerp. The municipalities outside the core city are rather small and do not see themselves in a position to integrate a global competition agenda (Mechelen is arguably an exception). The officials interviewed showed greater interest in solving local everyday issues and relating to their immediate neighbours than profiling their territories as part of Antwerp, alleging different economic and cultural profiles. They accept that the major economic player is the core city and hope to profit from its growth mainly by attracting residents. To a degree, they are conformed to a role of ‘dormitory town’ for the powerful core.

Although the region is very urbanised overall, networks championing a joint economic agenda have not developed. The Antwerp Investment Agency concerns only the core city – focusing on the port – and proposes strategic locations (including for industry) inside the municipal boundaries. The next scale is the Flanders Investment Agency, with no relevant networks in between. The Flemish government has provided a map showing to what extent each municipality collaborates with others, measured by the percentage of inter-municipal associations as part of all existing associations. Antwerp is indeed the less integrated municipality (see figure 9.5; Antwerp appears in pink), with only up to 25% of its associations having inter-municipal scope, while all the other municipalities form clusters in the 50% and 75% thresholds, showing a greater tendency for inter-municipal associations.



**Figure 9.5** – Inter-municipal collaboration in Flanders. Municipalities in the same colour share up to 25%, 50% or 75% of their associations. Note how up to 75% of the associations in the urban region’s ‘second city’, Mechelen, are shared with its immediate periphery (source: adapted from *Agentschap Binnenlands Bestuur*, 2014).

The weak ‘civic capital’ of the urban region in terms of networks finds a correlate in the sense of identity of the population. Antwerp is the only case where respondents openly refer to views of the core city by peripheral populations as dangerous, dirty, ethnically tense and poor. The feeling of distance is mutual, as core city inhabitants “*have a certain way of seeing themselves as a metropolis*” and refer to their surroundings as the city’s ‘car park’ (mayor in Antwerp MUA, interview, 2015). As described in the interviews, these contrasts are generalisations verging on the caricatural, but they reveal embedded core-periphery, urban-suburban ideologies that restrict any notion of a shared economic, cultural or political space. Nonetheless, this perception is slowly changing. There were also references to Antwerp as the focus of cultural life and leisure, and people across the urban region, especially younger generations, tend to appreciate that fact over the traditional parochial rivalries. The evidence gathered by the LaboXX project by the

spatial planning department at the City of Antwerp (2012) shows increasing movement of population and firms and a greater socio-economic mix reducing the old contrasts and tying up the urban fabric, in line with the findings of the precedent chapters.

The 'metropolitan idea' in the Bristol urban region is stronger than in Antwerp and the economic and policy arguments for integration are closer to the developments in Porto. However, it is not, like Porto, a case of the core city projecting its identity across the urban region: integration is conceived under the 'West of England' framework rather than keeping the name of Bristol. According to the core city respondent, there is a shared sense of interdependence between places, but not a general orientation towards Bristol. Local authorities see themselves on a level playing field, due to their comparable dimension and historical reliance on ancient and relatively autonomous urban centres (see the findings in chapter 8). In his view, cities like Bath have historically retained a sense of individuality. There is "*a lot of cross-fertilisation*" (interview, 2015) and a notion of complementarity, but not a willingness to waive identities or an interest in profiling smaller cities and towns as 'part of' Bristol. In this sense, the concept of integration in the urban region seems closer to a 'polycentric urban region' orientation, which arguably explains the ambiguous role of the Bristol mayor figure, as seen from outside the city, and the tensions involving a combined mayoral model (Harrison, 2015).

Therefore, several networks have formed to champion the urban region agenda, building upon the existing 'civic capital' (Nelles, 2013), but situated under the 'West of England' umbrella or the Bristol-Bath bipole, rather than a 'Metropolitan Bristol' vision similar to the Porto case. Examples of partnerships of institutions and firms championing the urban region are the Bristol and Bath Cultural Destinations Project, working in the tourism sector, the inward investment agency Invest Bristol & Bath (which despite its name, covers the entire West of England LEP area), or the recent MetroBus high capacity bus service, presented as a joint metropolitan project by the four local authorities. More recently, the Great Western Cities scheme has brought together Bristol, Cardiff and Newport in an effort to create another 'powerhouse' outside London (Morris, 2015). However, like Porto, these efforts still lack the regional leadership component seen by Post (2004) and Nelles (2013) as an important factor to make networks stronger and visible, and inspire local communities around them.

Due to the failure to interview representatives from the local authorities surrounding the core city, their perceptions about a shared urban region identity and its power to unite the urban region are inconclusive. However, Boddy and Hickman write that the four partners “*have rarely, if ever, been natural allies*” (2013: 751). They illustrate the existing social and cultural tensions with the different, often opposite views of urban growth and housing delivery, as Bristol is bounded by a green belt and additional growth necessarily falls on the surrounding authorities. Nevertheless, that research also highlights that local authorities are confident as to their ability to work together, although businesses are more sceptical (Clarke and Jeffrey, 2015).

## 9.5 Summary and conclusions

The absence of an urban region government turns Porto, Bristol and Antwerp into privileged arenas to observe how the shape and strength of inter-municipal partnerships drive integration. With no formal structure imposing cooperation and masking tensions, the argument by Nelles (2013), Feiock (2007) and others that integration, as measured by the formation of governance capacity, depends primarily on the political will and mutual relations of individual municipalities, becomes more evident.

This ‘new regionalist’ approach, focusing on temporary and partial networks with no institutional consolidation, characterises the case studies, and the opportunities and barriers identified by the theorists of the model were indeed seen by the interviewees as the most significant factors affecting their integration prospects: proximity of political cultures, homogeneity and symmetric relations, leadership and metropolitan identity; or lack thereof. However, institutional contexts and external pressures for collaboration vary, which creates distrust as to the strength of this approach and a varying demand for a more conventional metropolitan government or combined authority. This option is seen as more capable of overcoming the restrictions and power voids imposed by the central state, as well as communicating greater reliability as an integrated actor in dealings with the government. It would also protect partnerships from policy changes in individual municipalities, help coordinate the use of the limited resources across the urban region, and support the formation of agglomeration economies at that scale.

The distrust as to the potential of the existing inter-municipal collaboration may be related to the level of effectively devolved power. Expecting greater devolution, Bristol officials have shown greater commitment to fortify their inter-municipal relations, while Porto respondents have criticised their institutional model as flawed, however successful their urban region partnerships may be. But the 'slimming down' of provincial powers in Antwerp and the government pressures for inter-municipal partnerships have not yet produced visible collaboration incentives. A second factor of disappointment may be the lack of a strong and inclusive leadership (Post, 2004; Nelles, 2013). A regional leader with the connections and power to unite the urban region into a collaborative framework and build bonds to hold it together has not been identified in any of the case studies, although the mayors of Porto and Bristol are informally seen as likely candidates.

The risks of a formal metropolitan government are, among others, the attribution of 'locomotive' and 'carriage' roles to different parts of the urban region (Harrison and Heley, 2015). But more informal inter-municipal linkages left to their own devices may also cause this effect, as the views of the remote municipality in the Porto region suggest. Indeed, according to the respondents, geographical and morphological contiguity makes collaborative and generally symmetric relations unavoidable, and may even turn a formal government structure unnecessary. On the other hand, a metropolitan authority was considered important to find common logics with more distant municipalities in a larger urban region and clarify the distribution and transference of benefits.

This weakening of links is also illustrated by how the views of core cities/MUAs and smaller FUA municipalities vary. Core city perceptions are generally in line with the hypotheses advanced by this thesis and the findings of the previous chapters, in terms of their commitment to construct horizontal relations with other partners and recognition of a functionally and socio-economically interdependent and balanced urban region. More remote places, by contrast, tend not to recognise this configuration and perceive greater imbalances between the core city or agglomeration and the periphery.

Turning now to the question whether second-tier urban regions are able to overcome some of the barriers to integration typically associated with primate and polycentric urban regions, the short answer is that it depends. Several mutually



supportive factors distort the perception of the spatial configurations detected by the previous chapters. See how political contexts are more uniform in the Antwerp region than in Porto or Bristol, but the strong socio-cultural and scalar contrasts between the city and the peripheral municipalities increase the perception of coercion rather than creating a platform for collaborative solutions (Nelles, 2013). Supported by greater homogeneity, Porto is using greater political proximity between some actors to engage in effective integration, as suggested by theory, but risks sending a message of elitism to the remaining urban region. Bristol still has to resolve the tensions between the contrasting governance structures of the core city and its neighbours, although the greater demographic and economic balance between local authorities and their commitment to the LEP framework may reduce the barriers imposed by political gaps.

Therefore, the approximation of political cultures works best if another potential barrier to integration is also overcome, namely the asymmetrical relations and excessive heterogeneity among actors. The contrasts between municipalities and the history of parochial rivalries and unbalanced political relations result in a perception of Antwerp across the urban region as a dominant 'primate' city with effective power over the small surrounding municipalities. This happens regardless of the uniform political context and the evidence about the functional and socio-economic structure of the territory. Historical roles and power relations which are not fine-tuned with the nature of the territory are likely to mask the actual spatial configurations of urban regions.

In this sense, Porto and Bristol are more consistent with the hypothesis proposed here about second-tier cities. They are indeed committed to more horizontal relations with partners and ready to waive pretensions of dominance in the interest of better collaboration (Lefèvre, 1998), and gave examples of successful initiatives building upon this model. They justify the need for this approach with the way their important functions and economic activities are spread across the region, in line with the finding of this study. But the core cities also agree that they have the responsibility to mobilise their greater resources to lead that change. In some cases, they suggest that they have greater ability to build symmetric relations than their capital cities, which they see as more centralist and detached from the surrounding region. Despite the different views offered by places more distant from the core, and the role played by morphological

continuity in forcing symmetric relations, there is a general recognition of the necessity of this approach in Porto and Bristol. In general, it seems to have greater influence on the political will for collaboration than party loyalties and electoral uniformity.

Therefore, the findings are in agreement with Nelles (2013) when she argues that the shape of the institutional system and the opportunities for collaboration created by external agents are not the only predictors of successful urban region partnerships. Porto and Antwerp show that places with similar institutional contexts (strongly autonomous municipalities, absence of metropolitan government, ad-hoc partnerships, municipal fragmentation) produce different perceptions about the urban region concept and the relations between actors. Civic capital, in the sense of developing a strong 'metropolitan idea', is indeed decisive and the places where the notion of a shared identity is stronger are in fact those where wider and more inclusive networks championing the urban region agenda have developed – including municipalities, firms, universities, etc.

From the interviews, it is safe to argue that the territorial configurations detected so far – the distribution of important urban functions, the less hierarchic and more mixed and polycentric socio-economic configurations, the fragmented and multi-centred way in which the urban region has developed – contribute to produce a sense of shared territory beyond core-periphery conceptions or bounded municipalities, and to make common problems and priorities more evident for all actors. In turn, the networks that this general context helps to create give back to the territory by increasing the number of conduits through which the metropolitan idea is disseminated and occupies the public imaginary and the political agenda (Nelles, 2013).

Nonetheless, these networks can take different forms: in Bristol, they materialise the strong sense of interdependence and complementarity between places, but not the projection of the core city identity over the urban region. In Porto, they respond to the interest of firms, institutions and municipalities to profile themselves as part of the Porto 'brand', and to the general orientation of the population to the core city as a symbol – and the name – of the region. In this sense, we can perhaps argue that the Porto urban region is more advanced in the process of metropolisation as defined here, particularly in what concerns the conceptual shift through which the qualities and features formerly reserved to the space of the city are reconstructed at the scale of the urban region.

Respondents in the Porto urban region did refer to being ‘part of the same city’ and offered a vision of their urban region as a single extensive city made of different elements. The concept of ‘citification of the region’ advanced by this study seems to resonate with the public imaginary and the political vision of the Porto urban region. In comparison, the Bristol urban region is closer to a PUR approach to integration, although the identity and economic prominence of Bristol and, to some extent, Bath, as well as the possible role of the mayor in a future combined authority suggest a potential for metropolisation around a ‘metropolitan idea’ nurtured by both cities. Antwerp, despite some spatial evidence pointing otherwise, is strongly embedded in a ‘little capital’ approach to integration, especially when seen from its periphery. It is likely that slow changes happening on the ground have not reached politicians yet.

So what really makes the difference? What adds ‘metropolitan qualities’ to second-tier urban regions characterised by forms of extensive urbanisation and structured by autonomous municipal actors in collaboration? What factors contribute for a metropolisation process? The contrasts between the perceptions and outcomes of integration in Porto, Antwerp and Bristol and the similarities and differences of their spatial configuration gradually uncovered by this study can produce a concluding set of findings which the next and final chapter will try to summarise.



- PART 3 -

## CONCLUDING REMARKS

Building the extensive city?

## CHAPTER TEN. Building the extensive city? Conclusions

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This research project was developed from four initial observations. First, the belief that second-tier cities are a specific research and policy problem and need greater attention and differentiation that they have received until now. Second, the observation that research on the specific features of second-tier cities has neglected their current spatial configurations and historical modes of development, in particular at the urban region scale. Third, the argument that integration of urban regions, in its various forms and dimensions, is an ongoing process and a generally desirable strategy, and that tighter integration may be especially important for second-tier urban regions. Fourth, the notion that recent developments in the interpretation of contemporary urbanisation and urban region integration, namely the concept of metropolisation, are particularly fitting lenses to observe the specific features of second-tier urban regions.

To explore and connect these observations, a research hypothesis was developed: within certain conditions, the features of second-tier urban regions may be more beneficial for integration than primate urban regions, as they are characterised by a more balanced distribution of urban functions, a less hierarchic socio-economic configuration, a history of polycentric urban growth, and a potentially more collaborative institutional environment. The analysis focused on these four aspects, supported by earlier literature hinting at important differences, in terms of historical development and contemporary configurations, between urban regions around primate and second-tier cities. Literature also suggests that the chosen aspects of analysis not only play an important role in integration but may also reveal major differences between urban regions. The study then posed two questions: the first was whether second-tier urban regions have specific functional, socio-economic, historical-demographic and institutional characteristics which differentiate them in meaningful ways from other types of urban region; the second asked whether such features can provide them with a greater ability to pursue integration strategies. The answers found contribute to fill important research gaps, as we did not know precisely what differentiates second-tier urban regions according to the aspects above and how those differences affect their integration processes.

The research followed an eclectic set of case study-based comparative methods, based on the notion that finding specificities and variations among a limited number of instances is more compatible with an understanding of cities as individualised entities, rather than ranked entries. There was a triple purpose of (1) defining a region of variability of shared characteristics of second-tier urban regions, (2) highlighting their overall contrasts to other types of urban regions (with added reasons to consider primarily the differences to primate urban regions), and (3) exploring the individual specificities of each case study. Each empirical chapter was more methodologically targeted at a particular purpose and thereby followed specific research techniques. That association was mainly based on the likelihood of each empirical aspect to methodologically serve each purpose and on the availability and opportunity to employ important data to serve the study. The outcome was a set of semi-autonomous chapters, able to produce important findings on their own as well as to contribute to and build upon the gradual unfolding of the argument.

The empirical study started by a wide-ranging overview of second-tier urban regions in Europe and focused gradually on three main case studies, Porto, Bristol and Antwerp. They represent different geographic, cultural, economic and institutional contexts, contributing to cross-European research and bridging an often assumed North-South divide in comparative urban studies. But they were mainly selected due to their common features, namely their national urban systems dominated by large capitals, their status of important core cities embedded in polycentric and dispersed urbanised regions and their historical trajectory as extrovert, maritime and pragmatic 'second cities', detached from capital city dependency and with a tendency for cultural individuality.

Overall, the option to waive some methodological uniformity in order to add richness to the contents of the study and expand the relevance of its findings had positive outcomes. First, by looking at the research object through various perspectives, it created a more thorough picture of second-tier urban regions, helping to triangulate inconsistent results, avoiding misleading assumptions emerging from static viewpoints and uncovering the way the four chosen analytic aspects interact to activate or hamper each other. This is particularly visible in the relation between the spatial components (chapters 6-8) and the institutional components (chapter 9) of the analysis. Second, it

produced important insights at three scales of analysis: the general features of second-tier urban regions, their contrasts to primate urban regions and the place-specific aspects that make them diverge from the general findings. Third, it strengthened the role of the empirical chapters as autonomous research pieces, allowing the redaction of conference papers and journal articles based on individual chapters throughout the development of the thesis (see references).

Finally reaching the last chapter of the thesis, the study of second-tier urban regions is complete. Their richness and variety, as well as their similarities and affinities, have been demonstrated across the different perspectives of the analysis. The final chapter should inevitably be an attempt to generalise, while acknowledging the limitations of the sample size and, most certainly, the futility of looking for ‘universal’ rules for second-tier urban regions. The next section summarises, in a topical way, the answers to the two main research questions. Then, section 10.2 discusses the contributions of the thesis to existing research, based on the main bodies of literature it speaks to. Although the thesis has not dealt directly with planning and policy issues, section 10.3 discusses some of its implications for real-life problems currently faced by planners and policy-makers dealing with extensive urban regions. Finally, section 10.4 proposes questions that remain unanswered and thereby open for future research.

## **10.1 Answering the research questions**

The arguments were gradually developed throughout the empirical chapters in order to answer both research questions. The answers emerge from a mix of hard, quantitative data and a qualitative account of their implications for the argument, giving special attention to the relations between the findings of each chapter.

***Research question #1: Is there a relevant set of features in which second-tier urban regions are fundamentally different from other urban regions?***

This study contributes with a set of previously unaddressed features of differentiation of second-tier urban regions, with a particular attention to the comparison with primate urban regions. These are the main findings, distilled from chapters 6 to 8:



- Chapter 6 showed that, when compared to second-tier cities, primate cities benefit from a surplus of urban functions which is explained by their status in national urban systems rather than their greater size or network embeddedness.
- While this bias is kept in monocentric and polycentric urban systems, second-tier cities in the latter perform better in terms of presence of urban functions.
- Unlike primate cities, second-tier cities lack the capacity to capture the critical mass of their urban region population to support the size and growth of their own 'inflated' core city functions.
- The more modest functional array of second-tier urban regions is spatially quite distributed, with important functions spread across places beyond core cities, while primate urban regions tend to centralise functions in the core and cast an agglomeration shadow over their surroundings.
- These contrasts between more hierarchic and rigid vs. more balanced and looser forms of functional arrangement have relations of similarity with the socio-economic organisation of population in second-tier and primate urban regions.
- In fact, chapter 7 showed that socio-economic configurations in second-tier urban regions are spatially more heterogeneous and fragmented at smaller scales than in primate urban regions, and reveal the lesser ability of core cities to impose core-periphery hierarchies and constrain development at larger scales.
- Despite individual differences, the socio-economic contrasts between primate and second-tier urban regions follow a similar pattern in all cases, in terms of location, relative share, predominance and homogeneity of specific socio-economic groups.
- Smaller centres are thus able to support a socio-economic diversity and scope, and thereby a functional offer and attractiveness for population and firms, that they would not achieve as isolated centres or as satellites of a dominant primate city.
- The heterogeneity detected may rely in part on the presence of older urban morphologies which were not obliterated by large patches of uniform spatial and socio-economic typologies associated with the centrifugal expansion of core cities.

- Indeed, chapter 8 argued that second-tier urban regions lack the forces of spatial reconfiguration typical of centrifugal expansion overriding local structures; their core cities failed to counteract the tendency for autonomous urbanisation processes across the region.
- Therefore, their history of development is characterised by a mixed process of core city growth and the densification, expansion and coalescence of multiple urbanised fragments across the urban region; contradictory processes have coexisted in time.
- Proximity to the core city did not play a substantial role in the rate of population density change in the urban regions. Different areas followed localised growth trends, mostly autonomous from the centrifugal expansion of the core.
- Overall, the trajectory of formation and contemporary configurations of second-tier urban regions broadly conforms to Champion's 'incorporation mode' (2001), as well as to its functional and socio-economic corollaries.
- Despite the specificities of individual cases, the functional and socio-economic configurations and the mode of formation of second-tier urban regions seem to be correlated; they build a set of specific features which differentiate them from primate urban regions in fundamental aspects across different national contexts.

***Research question #2: Do these specificities affect integration processes and provide second-tier urban regions with a greater ability to pursue integration strategies?***

The focus of the second research question has contributed to clarify the relation between spatial configurations and integration prospects in urban regions. The main findings were discussed in chapters 5 to 9 and can be summarised as follows:

- The initial overview in chapter 5 argued that the large share of population outside core agglomerations, the level of municipal fragmentation and the increased functional performance when larger territorial scales are considered suggest an incentive to integration in the main case studies.

- Chapter 6 added the argument that, given the lack of single cores capturing the whole functional range and their well served urban regions, second-tier cities need to rely on the urban region scale to capture more urban functions; this also provides an incentive to integration.
- The overall modest functional performance of second-tier urban regions, compared to primate urban regions, suggest that these spread out functions can be more complementary than redundant, leading to greater interdependence and potentially tighter cooperation.
- For second-tier urban regions, this incentive can be even more present at territorial scales larger than their current 'functional urban area' definition.
- Then, chapter 7 suggested that the overall socio-economic structure detected in second-tier urban regions can improve the attractiveness of individual centres for population and firms, which affects their economic autonomy and mutual functional and power relations.
- Together, the functional and socio-economic configurations of second-tier urban regions point to greater proximity between the core and the peripheries, and to a potential sense of 'cityness' in many parts of the territory. This may provide fertile conditions for an integration process that relies on horizontal and unconstrained relations between the components of a single, extensive city, rather than on dependence and hierarchy.
- Chapter 8 supports this view, as the history of formation of second-tier urban regions has failed to produce 'integration' in the sense of a hierarchic system of dependencies of territorial scale, led by a dominant centre. On the other hand, it led to the spatial coalescence and infrastructural interdependence of places whose development was relatively free from core city influence until recently.
- Altogether, this creates conditions for institutional integration in second-tier urban regions which separate them from both primate city and polycentric urban region models and their respective barriers: asymmetrical relations between actors and too distant socio-cultural contexts, on one hand, and lack of clear leadership and a weak sense of belonging to a shared metropolitan space, on the other.

- This was the argument of chapter 9, whose first finding was that external pressures are important to encourage collaboration towards integration, but only when there are expectations of effectively devolved power and autonomy.
- Such expectations, together with a strong regional leadership able to produce a joint vision, may even mitigate the need for a formal metropolitan government.
- However, there may be a spatial limit to the above; while morphological contiguity seems to enhance the sense of interdependence and horizontality and turn 'naturally' into collaboration directed at integration, an institutional structure is important to aggregate and find common logics across larger territorial units.
- Indeed, the perceptions of the potential conditions for integration are different in different areas of the urban region. This distortion of the perception of spatial configurations is influenced by excessive scalar and socio-cultural contrasts between actors (more than by political opposition) and their history of power relations, and can override the notion of an integrated urban region (Antwerp).
- A non-dominant core city, a developed sense of horizontality and interdependence among actors, and few socio-economic and cultural contrasts between core and periphery can increase the likelihood of collaboration across urban regions; core cities must provide resources and leadership but waive dominance.
- A leading city with sufficient historical and cultural importance to cast its identity upon the urban region scale can also increase collaboration aiming at integration, as other actors tend to adhere to its name and identity (Porto); however, successful collaboration can also happen when some historically important centres (arguably a limited number) build together a new metropolitan identity (Bristol).

## 10.2 Contributions to literature

This thesis tried to analyse a clearly defined research problem and provide a consistent argument overall. Its general contributions to literature are encapsulated in the two research questions: it specifies a set of functional, socio-economic, historical-demographic and institutional features in which second-tier urban regions differ from other types of urban region, and explores in what ways and under what conditions those

features influence their ability to engage in integration processes. But, in its progression, the thesis contributes to different bodies of literature, which are related to the departure arguments that motivated the study. This section covers the main research areas the study speaks to.

### *Second-tier cities as a specific research problem*

Following recent literature, the thesis contributes to the acknowledgement of the importance of second-tier cities in research and policy and helps to redirect attention to a topic that has been traditionally neglected by urban studies. This neglect is partly based on the excessive predominance of ‘primate’ or ‘global’ cities, not only as loci of the most challenging urban promises and problems, but also as the geographical seat of research institutions and scholars. But the neglect is also due to the somewhat flawed definition of ‘second-tier city’, which changes from country to country and has unclear boundaries with its larger and smaller counterparts. The thesis contributes to clarify this, building on existing research to distinguish the mutual incompatibilities of functional and political-historical approaches, and arriving at a clear definition of second-tier cities, at least for the European context, whose consistency could be kept throughout the study.

The study also delved into existing research, such as the ESPON report on second-tier cities in Europe (2012a), to confirm that the barriers to development and economic growth in second-tier cities vary from country to country, but a consistent bias favouring primate cities exists at several levels. This had been argued before for political and economic aspects (Crouch and Le Galès, 2012; Dijkstra et al. 2013), but the study demonstrated that this imbalance also exists, for example, in terms of the presence of urban functions (chapter 6). While this is hinted at in the findings of the BBSR study of European metropolitan areas (Göddecke-Stellmann et al., 2011), an explicit association to second-tier cities had not been made before.

Another contribution for this body of literature is the placement of second-tier cities as a specific concept, which should not be dismissed simply as stunted global cities and should not be compared according to standards defined by and for other kinds of cities. The literature supporting this view has recently been improved by Hodos’ proposal

of the 'second city' as a particular type (2007; 2011), with unique historical trajectories and development priorities. This study contributes to expand that notion in two ways. First, it relates the specificity of second-tier cities to the extensive literature refusing rank-based understandings of cities across the world, based on simplifications, assumptions of competition, and generic indicators defined to the benefit of a few actors. This has been argued as crucial in comparisons between Western, Asian and African cities, for example (Robinson, 2006; Chen and Kanna, 2012), but not for second-tier cities in comparison with primate cities; however, their different features and the uneven political and economic conditions under which they operate in many European countries, greatly justify this approach. Second, the study adds to the features already specified by several scholars as typical of second-tier cities – mostly historical, cultural, socio-political and economic performance aspects (Markusen et al., 1999; Hodos, 2011; ESPON, 2012a) – a set of new and previously unexplored perspectives, which consider spatial, functional, demographic and institutional aspects, and, most importantly in present times of generalised urbanisation, abandon the idea of a 'city' as a spatially and socially bounded space to explore the scale of the second-tier urban region.

### *The configuration and development of urban regions in Europe*

One of the arguments of this study is that research on the specific features of second-tier cities has neglected their contemporary spatial configurations and historical modes of development, particularly at the urban region scale. By exploring that scale, and setting out hypotheses about the specificity of second-tier urban regions, the thesis contributes to existing literature on the topic in four different ways.

First, the study builds upon Champion's crucial model - perhaps not sufficiently followed up by recent research - of urban region development according to centrifugal, incorporation and fusion modes (2001). The findings give strength to the hypothesis that second-tier urban regions broadly conform to the incorporation mode, both in their trajectory of formation and in their correlated present configurations. The corollaries proposed by Champion about the economic and functional structure of core cities and smaller centres in urban regions emerging from the incorporation mode resonate with

the findings about the functional and socio-economic structure of second-tier urban regions. This finds an arguably still missing ‘representative type’ of the incorporation mode, often neglected by the polarised distinctions between the other two; both have, indeed, typical representatives: the dominant, expanding, primate cities as illustrations of the centrifugal mode, and the networked polycentric urban regions (PURs) as illustrations of the fusion mode. Despite the limited capacity to generalise from this research, a clear illustration of the incorporation mode can now be argued.

The second contribution to the topic is linked to this polarisation between the monocentric, centrifugal and hierarchic model and the polycentric, multidirectional and networked model as the two dominant urban system configurations. Indeed, research has not done enough to add nuance to this duality and to classify urban regions which do not sit easily within either model. This is visible in assumptions that urban regions are either mono- or polycentric, primate or networked, and that spatial change necessarily occurs in that direction (Burger et al., 2011). By establishing a set of particularities of an ‘in-between’ model and discussing the contradictions and diversity of its trajectories of change, the thesis contributes to add diversity and break the homogeneity of the world outside the primate vs. PUR duality.

A third contribution to the topic of the ‘urban region’ is the detection of the mutual relations between spatial, functional, socio-economic or institutional perspectives of analysis. While they certainly do not reflect the same processes and relations, the research showed their affinities and mutual influences. For example, chapters 6 and 7 suggest that socio-economic sorting of population changes according to the pattern of functional distribution, but the reverse may also be true: the direction of causality is not clear from the analysis. The study also proposes links between the trajectory of formation of urban regions and its bearing on contemporary cultural and political relations between municipalities. For example, it suggests that some cities (extrovert, port cities, rather than territorial, dominant capital cities) were more concerned with looking outward than dominating their hinterland and therefore did not try to expand their economic and political agenda over the surrounding territory (see chapter 8). They failed to consolidate dispersed industry into larger and denser clusters and so had no need to conduct major spatial and infrastructural interventions. Present day morphologies, functional

interdependencies, cultural relations and mutual perceptions of the actors of the urban region are influenced by this history.

A final component of the discussion about urban region configurations and trajectories is the importance given to history. The historical development of urban regions has rarely been given sufficient weight to understand their present forms and problems, especially by policy-makers. This thesis resorts to history to add specificity and individuality to the trajectory of each urban region. For example, while recent research has used Champion's model (2001) to stress that urban regions can move along its three modes of growth in relatively short periods (Solis et al., 2015), the longer-term analysis revealed that a dominant mode can appear very early (in this case the incorporation mode), not necessarily in a succession with the other two (see chapter 8). Urban regions may achieve dispersion without having experienced suburbanisation, and may turn polycentric without ever having been strictly monocentric.

#### *The desirability of integration in second-tier urban regions*

The thesis also contributes to the discussion about the integration of urban regions, in its various forms, as an ongoing process and a generally desirable strategy, and introduces the debate whether tighter integration may be especially important for second-tier urban regions. This is a still unexplored issue, and a very important one for policy.

To start, the research confirms that integration in second-tier urban regions does enhance the drivers of economic growth proposed by recent literature on European cities: increased size, greater functional mass and diversity and lower institutional fragmentation. It does so more than in the case of dominant, primate cities. This had been separately argued by literature (see ESPON, 2005, for size; Goddecke-Stellmann et al., 2011, for functions; Harding et al., 2010, for institutional integration), but the three aspects had not been gathered before. In fact, considering the urban region rather than the core city or agglomeration scale allows greater relative gains in second-tier than in primate cities. And the current policy priorities emerging from the case study interviews show that (despite the more ambiguous case of Antwerp) they are committed to planning at the urban region scale to enhance their ability to act as a stronger political actor at



higher level debates. What is not clear is whether the long-standing territorial and inter-municipal competitive mentality is being abandoned in the name of a more efficient and shared use of resources which build upon the urban region scale. This is an ongoing debate, but one that needs attention in a period of economic uncertainty in Europe, in which many smaller urban regions see their public investment diminish, often to the privilege of 'national champion' capital cities (Crouch and Le Gales, 2012).

A related contribution to this topic, in the sense that it evaluates the access to and benefits from this shared use of resources, is the agglomeration shadow vs. borrowed size debate. As Glaeser (2010) puts it, agglomeration economies are not a win-win game, and enhancing the centrality and attractiveness of certain places may easily be done at the cost of others; he gives the example of the agglomeration effects of Crossrail in London, presumably offsetting jobs and reducing agglomeration economies elsewhere in the urban region. Recent research has looked at this imbalance from the perspective of 'agglomeration shadows', the negative impact of large urban centres on the presence of urban functions on the smaller centres nearby. Studies have shown that large cities in Europe cast indeed a functional agglomeration shadow over their region, consistent with central place theory (Burger et al., 2015). Champion's model (2001) had also mentioned 'satellite' towns emerging from the centrifugal mode, as opposed to better served and more autonomous urban centres emerging from the incorporation mode. This may not be so in specific functional sectors (such as concentrated employment and retail; see Phelps, 2001) but is clear across the type of functions that ultimately attract people and firms, such as urban amenities (Burger et al., 2015). Therefore, the agglomeration shadow can have serious consequences to the attractiveness and liveability of the urban region as a whole, and this study makes an important contribution in this respect, by showing consistent differences between primate and second-tier cities across Europe. The analysis in chapter 6 showed indeed that primate cities cast an agglomeration shadow over their urban regions, but a reverse pattern is visible in second-tier urban regions. There, smaller centres have the potential to 'borrow size' (Alonso, 1973) from the urban region scale and host more functions than their individual size would suggest. And, considering that these centres are more than satellites, greater integration and connectivity also benefits the core city, which can 'borrow performance' from the urban region scale.

Finally, the thesis provides another important contribution to the issue of integration, by associating certain types of barriers to integrative strategies to the nature of primate and polycentric urban regions, and proposing an ‘in-between’ position for second-tier urban regions that can mitigate some of those barriers. This adds relevant material to the existing literature exploring the paths to successful integration: chapter 9 generally confirms Lefevre’s argument (1998) that core cities must be ready to lead but not dominate, and provides an explanation to why integration strategies in Europe have been best implemented in second-tier urban regions (Turin, Manchester, Bordeaux, etc.). The results of the interviews address the conditions under which asymmetrical relations between partners can be corrected and political and cultural distance can be overcome, and suggests links between these potentials and the functional, socio-economic and historical arrangements of urban regions. The study also adds insights to the debate between institutionalist and new regionalist governance approaches, by exploring urban regions lacking a formal metropolitan government and evaluating under what conditions such a structure is necessary, welcomed, or can be done without. Finally, it contributes to acknowledge the importance of the ‘metropolitan idea’ (Nelles, 2013) as a trigger of collaboration and integration. Despite the limitations of the sample and analysis, the study starts to explore what influences the process of construction of an identity for the urban region, what shapes that identity can adopt, what aspects are perceived as more important for that process, how such perceptions change in different places of the urban regions, and how to address those distortions.

#### *A general theory of metropolisation*

The final body of theory addressed by this thesis revolves around the hitherto vaguely defined concept of metropolisation. Despite its complicated genealogy, metropolisation, as initially understood here, was developed as an interpretative lens to observe urbanised territories lacking strong density peaks and ‘proper’ cities, such as the Veneto in Northeast Italy (Indovina, 1990; 2004), or certain parts of Flanders (Meulder et al., 1999). More recently, the concept has been expanded to denote the so-called ‘explosion of the city’ to the urban region scale (Font, 2004; Eisinger, 2006; ETH Basel, 2010).

However, this study adds two important, but previously unaddressed, levels of precision. First, the notion that metropolisation does not describe a city or agglomeration ‘exploding’ or ‘dispersing’ into an urbanised region, but rather an urban region *consolidating* into an extensive city. This is a major difference of perspective: the extensive city can emerge not necessarily in relation to the expansion of a particular city, and liveability (Balducci et al., 2011) and ‘cityness’ (Sassen, 2005) can be sought for and prioritised at any point of the territory: the citification of the region rather than the regionalisation of the city. The second contribution is the connection between the type of urbanisation that the lens of metropolisation is tailored to observe and the main features of second-tier cities. In fact, metropolisation gives predominance to non-hierarchical and decentralised spatial forms, socio-economic and functional structures, and proposes more horizontal and complementary relations between all components of the urban; these are also features which seem more present in second-tier urban regions.

A related contribution to the theoretical debates about metropolisation is the new conceptualisation of its triple meaning: a territorial process through which spatially, functionally and institutionally fragmented urbanised regions emerge as coherent entities able to reap the benefits of scale; a conceptual rescaling through which the features and qualities formerly reserved for the ‘city’ are reconstructed at the integrated urban region scale; and a development strategy aiming at such integration. This is a further step of evolution of the concept, which finds a compelling illustration and justification in the second-tier urban regions analysed here: they can be argued as experiencing the territorial processes, rescaling and reconstructing their city-like qualities and having an incentive to commit to the integration strategies conceptualised by metropolisation.

Furthermore, the triple meaning now attributed to the concept draws connections between research in different parts of Europe advocating different but complementary things: from early observations of territorial processes by Italian and Spanish scholars (Indovina, 1990; Nello, 2001), to notions of conceptual rescaling of the notion of ‘city’ theorised by Schmid (2006) or Brenner (2014) and made concrete by the attention to city-regional transport by Hall (2013a) or the spatial visions of the ETH Basel (2010), to the importance of integrated policy strategies at that scale advocated by Sieverts (1997) or Lambregts (2006). This is only a sample of research debates whose connections have

been tenuous, but which contribute to a common territory of urban theory. By linking them – sometimes reading documents in four or five different languages – this thesis tries to bridge national and linguistic divides which hamper comparative research.

To conclude, a distance must be set between the claims made by the concept of metropolisation, as applied to the territories of extensive urbanisation, and the notions of ‘planetary urbanisation’ advanced by Brenner (2014; also Brenner and Schmid, 2011), drawing upon the ideas of Lefebvre (1970). While sharing similar concepts, namely the ubiquity of urbanisation, the ‘ordinariness’ of ‘cities’ as one of the forms of the urban, etc., chapter 3 also argued that extensive urbanisation lacked the ‘planetary’ ambition of the authors mentioned above. A recent critique of this version of urban analysis (Storper and Scott, 2016) suggests that there is greater theoretical and analytical loss than gain in stating that there is no distinction between cities and the world at large and that everything is indifferently ‘urban’, all differences being just a matter of degree. The interpretation of extensive urbanisation offered by metropolisation is ultimately more conservative. It does not wish to radically erase the specificity of cities; on the contrary, it suggests new ways to specify and typify them, against the backdrop of the generically urban. In metropolisation, it is not the urban that becomes deterritorialised and planetary, but the city, in all its aspects, that is reconstructed at the scale of the urban. But boundaries and distinctions between urban regions and elsewhere exist, even if the demarcations are drawn pragmatically at various places, according to the research questions and data at hand. In tune with Storper and Scott, metropolisation demands a reality check from the “*convoluted philosophical and epistemological abstractions*” (2016: 2) that remove the concrete and material from the interpretation of urban affairs; note that the three dimensions of the concept – the physical, the conceptual and the strategic – are inseparable and only offer a satisfying explanation when taken together.

### 10.3 Implications of the research

Research studies must be confronted with the question of the implications and usefulness of their results for real-life problems. This thesis does not directly address issues of planning or policy, but some consequences of its findings have a bearing on such themes.

First, there are messages for policy-makers working with second-tier cities. Biased policy and investment decisions and a generally unbalanced playing field exist between primate cities (mainly capitals) and second-tier cities in many European countries. They have a long history associated with the stability of the European urban system, but are present today in many aspects of urban development. While capitals do not decrease their role, second-tier cities seem to perform best (at least in functional terms) in more polycentric urban systems. Following the recommendations of the ESPON report (2012a) and other researchers, it is important to find ways to improve the fortunes of second-tier cities (place-based investment, strengthening of city networks, political regionalisation, etc.) in countries currently dominated by primate cities.

A further issue is the need to consider the specificities of second-tier urban regions rather than borrowing models, downgrading observations, transferring assumptions and implementing strategies primarily suited for other places. Global rankings will fatally impair smaller cities and may restrict their conceivable futures. For example, second-tier cities have historically been more outward-looking than territorial, more internationally oriented than illustrations of national identity. Policies may wish to enhance their international networking (already quite developed in Europe) and rebuild a 'hanseatic', cosmopolitan profile of old, mid-sized cities, as suggested by Hodos (2011), rather than striving for political and economic centres of control or expanding a political and economic agenda of dominance over their surrounding region.

This is related with the overall demands of planning for the 'extensive city'. Lambregts' appeal for urban regions to set free the 'metropolitan potential' locked into them (2006; 2009) is of great importance. For example, second-tier urban regions have both fewer and more distributed urban functions (see chapter 6), suggesting the need for policies that optimise complementarity and the sharing of scarce resources. Especially in the current economic climate, which restricts investments outside primate cities and the addition of new assets to second-tier cities, intra-regional cooperation expands the pool of available complementary assets and allows their efficient use. The socio-economic configuration of second-tier urban regions, when compared to primate urban regions (see chapter 7), suggests the potential of policies enhancing polycentricity and ensuring liveability at any point of the territory, as proposed by Sieverts' *Zwischenstadt* (1997) or

Balducci et al. (2011) in their *City of Cities* strategic plan for Milan. The economically, demographically, functionally and politically 'relevant' urban territory can be more than a single core city or even a set of discrete centres. Planners and policy-makers may find themselves confronted with a fully urban entity of regional scale, and build on that to drive socio-economic development. And such a process may not demand the intensive spatial alterations and infrastructural investments necessary for a city to expand into virgin territory. The processes of densification and coalescence of old and dispersed morphologies in second-tier urban regions (see chapter 8) reveal a spread out 'latent' urbanisation (Meulder, 2008) where new urban programmes can be inserted, arguably with comparatively lesser investment.

This should not dismiss notions of social justice and the need for viable policies towards that goal. The rescaling of the city does not ensure a just and democratic regime any more than a bounded city, where inequalities and divisions have always existed. Metropolisation may well be non-city-centric, value equally all forms of urbanisation, promote territorial liveability and advocate horizontal relations between actors in urban regions; but the gains and losses of individual localities and the perceptions by sub-regional identities of the overall benefits of integrating an urban region must always be considered (see chapter 9). For example, a strong core city may have a positive role in building a metropolitan identity and leading collaboration, but it risks sending a message of elitism to other parts of the urban region. Or two or more important cities may collaborate to develop a new, hybrid identity. In other cases, a formal metropolitan authority can do a better job in distributing benefits and finding common logics between geographically and culturally distant areas. This thesis provides some insights for policy about the contexts in which either of these options may be appropriate.

#### **10.4 Conclusion: a continuing research agenda**

Given its openness and ambitions and its practical constraints of time and size, this research project must be limited in scope and depth. It arguably opens several lines of inquiry, but leaves several questions unanswered or only partially answered. What follows is their account, and some suggestions for further research.

This thesis proposed a model of urban system, in response to the detected features of second-tier urban regions, beyond the primate-hierarchic and the polycentric-networked frameworks (see the characteristics of both in table 4.1). But that model is not complete. Despite the findings of the empirical chapters, more cases must be evaluated to generalise the characteristics of that model and fill the missing gaps: in-depth research can explore more about morphological structures, functional linkages, trends of specialisation and economic externalities.

The research has focused on spatial aspects, particularly the location of functions, socio-economic groups and growth nodes, as well as the physical patterns they imprint on the territory; in other words, the 'space of places'. Nothing has been said about the 'space of flows', namely the movement of people, goods and ideas, or about relational aspects linking urban functions or distinct socio-economic aggregates. A more complete analysis of the features of second-tier urban regions must address that component.

Nevertheless, some gaps remain even in the space of places explored by the study. Population and urban functions are quite spread out across second-tier urban regions and relatively disassociated from the core city. However, this pattern may either concentrate in several smaller morphological nodes in the region or be more unrelated to spatial agglomeration and disperse across the low-density fabric of the urban region. Since population and urban functions trigger extensive development around them, making this distinction and exploring what spatial impacts rise from each tendency is important.

Urban functions provide another path for future research. The restriction to 'top-level' functions, as defined by the BBSR study (Goddecke-Stellmann, 2011) and adapted here, may miss important functional sectors, which are particularly relevant for second-tier urban regions, but nonetheless fly below the radar of this analysis. Further studies covering more specific functional sectors may shed more light on the true incentive for functional integration in second-tier urban regions.

The contrasts of socio-economic configuration between second-tier and primate urban regions are clearly impaired by the sample size (and also by the incomplete dataset available for Antwerp-Brussels). Further research may expand the comparison to check, for example, whether countries with more polycentric urban systems also exhibit

strongly different arrangements among urban regions. And even within countries with dominant capitals, where the contrast to smaller cities is apparent, it would be interesting to explore whether all second-tier cities follow similar patterns, and, being very likely that they do not, whether they least clearly differ from the capital city. Another step would be the identification of factors (historical, functional, institutional) that differentiate between second-tier cities. The fact that the geodemographic analysis used for the London-Bristol comparison covers the whole United Kingdom would allow such comparative work, namely between the Core Cities.

Another aspect only partially addressed is the direction of causality: the research shows significant correlations between functional, socio-economic, historical-demographic and institutional features of second-tier urban regions, and provides a consistent explanation to explain their mutual relations. However, more specific research is needed to detect actual relations of causality: how do functional patterns affect socio-economic sorting and how do socio-economic patterns influence functional configuration? These and other questions need specialised and in-depth case study research which was beyond the scope of this thesis.

The issue of integration can also be further explored. Is it true that more successful integration strategies tend to be implemented in second-tier urban regions? And is this because they are capable of overcoming barriers to integration embedded in the nature of primate and polycentric urban regions? An update of second-tier metropolitan governance experiences across Europe, with a larger sample size than the three cases analysed here, can provide more arguments for generalisation.

A final set of questions involves the concept of metropolisation, and its historical-geographical grounding. How did formerly distinct urban entities become 'cities'? Are there historical invariants that make things 'work' in some places and not others? Are there key turning points which insert a 'metropolitan idea' into a fragmented set of urbanised areas? What is the role of government, infrastructure or media? How do theories of territorial identity and spatial attachment relate to spatial development strategies? What advice can be given to urban regions today trying to engage in a metropolisation process? These are only some of the questions arising from this research. Much more work is needed to answer them.



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- APPENDIX 1 -

INTERVIEW PLAN

**Chapter 9. The metropolitan idea: inter-municipal collaboration and integration in second-tier urban regions**

Respondents: Mayors and/or city councillors in the Porto, Bristol and Antwerp urban regions (including representatives from core city and smaller centres)

Duration of interviews: 40-60 minutes

Type of interviews: semi-structured, according to the guidelines below.

1. Presentation, explain purpose and logic of study.
2. Identify questions to explore in the interview: do second-tier urban regions create a specific political landscape more prone to successful integration strategies, when compared to other types of urban region?
3. CONTEXT: GENERAL BACKGROUND / INSTITUTIONS (15-20 min.)
  - Would you say that absence of strong supra-municipal government level turns inter-municipal cooperation into the major driver of city-regional governance capacity?
  - From the point of view of your municipality, is the existence of an integrated urban region recognized? Is it important to embark in cooperation strategies? In what areas is it more visible?
  - To what degree are municipalities able to coordinate activity at the urban region scale and take action?
  - To what extent are actors able to recognise collective challenges?
  - To what extent are actors able to assemble relevant agents?
  - To what extent are actors able to debate alternatives and reach agreements?
  - To what degree is the urban region an effective actor in larger frameworks?

4. QUALIFYING THE ENVIRONMENT FOR COOPERATION & CAPACITY-  
BUILDING AND POTENTIAL BARRIERS (25-30 min.)

A. Regarding institutional asymmetries and leadership (see section 9.2)

- Do you feel that power relations between municipalities are symmetrical or asymmetrical, despite their formally equal power?
- Is there a general awareness of joint gains in cooperation frameworks or rather coercion to embark in unbalanced distribution of benefits?
- How do you see the role of your city vs. the core city and/or other areas of the region in terms of this distribution?
- Would you rather always include the large scale and the core city in inter-municipal cooperation frameworks or rather bypass it and integrate centres more related by size/ proximity/economic profile/etc.?
- In what areas are things going better? In what areas are the costs of building cooperation greater than potential benefits?
- Do you see dispersed authority and the absence of a single centre of decision as an advantage? Are there more opportunities for smaller places to lead networks and make their voice heard?
- Do you see the core city as a dominant centre tilting the playing field or a partner at equal standing with other centres, despite its leading city role? Is it ready to provide resources and initiative, but waive dominance?
- In general, do you think the absence of a dominant city and an excessive core-periphery hierarchy would increase the willingness to cooperate of secondary centres? Does this play a role in your urban region?

B. Regarding willingness to cooperate and shared identities (see section 9.2)

- Do municipal authorities tend to give excessive focus to their boundaries when identifying priorities and debating alternatives or are they metropolitan-oriented?

- How does this take shape? Can you give examples of networks, leadership initiatives etc. which work as conduits to spread a metropolitan orientation?
- Does political proximity between councils play a role in equalising the perceptions of priorities/goals, allowing more collaboration?
- From your perspective as mayor/councilor, how much is idea of the urban region interiorized by the population in general?
- Do you think there is a sense of a shared territory, an 'extensive city' made of several interdependent components and a sense of belonging to that entity, or are city-regional relations more based in parochial competition between neighbours?
- How is the core city seen by others in this respect? A privileged, dominant core whose relation of imbalance with others is a barrier to a just, cooperative and integrated urban region? An inspiring leading city, not engaging in relations of dominance and coercion but rather providing orientation and an 'anchor' to frameworks that would otherwise lack leadership and focus?

5. Closing. Summary of conversation, ask whether there are additional points. END